



**FCC PART 15
TEST REPORT
No. I21Z62173-IOT05**

for

Lenovo (Shanghai) Electronics Technology Co., Ltd.

Portable Tablet Computer

Lenovo TB-J606F

FCC ID : O57TBJ606F

with

Hardware Version: Lenovo TB-J606F

Software Version: TB-J606F_RF01_210805

Issued Date: 2021-12-06

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z62173-IOT05	Rev.0	1st edition	2021-11-26
I21Z62173-IOT05	Rev.1	1.P.11 add the 7.2. Statements 2.All the reports has changed the Software Version.	2021-12-02
I21Z62173-IOT05	Rev.2	1. Add attenuator information. 2. Update the power result.	2021-12-06



CONTENTS

CONTENTS	3
1. TEST LATORATORY	5
1.1. INTRODUCTION & ACCREDITATION.....	5
1.2. TESTING LOCATION.....	5
1.3. TESTING ENVIRONMENT.....	6
1.4. PROJECT DATE.....	6
1.5. SIGNATURE.....	6
2. CLIENT INFORMATION	6
2.1. APPLICANT INFORMATION.....	6
2.2. MANUFACTURER INFORMATION.....	6
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARYEQUIPMENT(AE)	7
3.1. ABOUT EUT.....	7
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST.....	8
3.1. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST.....	8
4.1. GENERAL DESCRIPTION.....	9
4.2. INTERPRETATION OF THE TEST ENVIRONMENT.....	9
5. REFERENCE DOCUMENTS	9
5.1. DOCUMENTS SUPPLIED BY APPLICANT.....	9
5.2. REFERENCE DOCUMENTS FOR TESTING.....	9
6. LABORATORY ENVIRONMENT	10
7. SUMMARY OF TEST RESULTS	10
7.1. SUMMARY OF TEST RESULTS.....	10
7.2. STATEMENTS.....	11
7.3. TEST CONDITIONS.....	11
8. TEST EQUIPMENTS UTILIZED	11
8. MEASUREMENT UNCERTAINTY	12
8.1 TRANSMITTER OUTPUT POWER.....	12
8.2 PEAK POWER SPECTRAL DENSITY.....	12
8.3 OCCUPIED CHANNEL BANDWIDTH.....	12
8.4 BAND EDGES COMPLIANCE.....	12
8.5 SPURIOUS EMISSIONS.....	12
ANNEX A: MEASUREMENT RESULTS	12
A.1. MEASUREMENT METHOD.....	12
A.2. MAXIMUM OUTPUT POWER.....	14
A.3. PEAK POWER SPECTRAL DENSITY (CONDUCTED).....	16



A.4. OCCUPIED 26DB BANDWIDTH(CONDUCTED).....	18
A.5. BAND EDGES COMPLIANCE.....	46
A5.1 BAND EDGES - RADIATED.....	46
A.6. TRANSMITTER SPURIOUS EMISSION.....	51
A.7. AC POWER LINE CONDUCTED EMISSION (150kHz- 30MHz).....	71
FIG. 64 AC POWER LINE CONDUCTED EMISSION-802.11A.....	72
A.8. 99% OCCUPIED BANDWIDTH.....	73
A.9. POWER CONTROL.....	81
ANNEX B: ACCREDITATION CERTIFICATE.....	82



1. TEST LATORATORY

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Conducted testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

Radiated testing Location: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology
Development Area, Beijing, P. R. China 100176



1.3. Testing Environment

Normal Temperature: 15-35℃
Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2020-09-23
Testing End Date: 2021-11-25

1.5. Signature

谢宙震

Xie Xiuzhen
(Prepared this test report)

Zheng Wei
(Reviewed this test report)

Hu Xiaoyu
(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: Lenovo (Shanghai) Electronics Technology Co., Ltd.
Address: Section 304-305, Building No. 4, # 222, Meiyue Road, China
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City: Shanghai
Postal Code: /
Country: CHINA
Contact: Spring Zhou
Telephone: +86 18116118237
E-mail: zhoub1@lenovo.com

2.2. Manufacturer Information

Company Name: Lenovo PC HK Limited



Address: 23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay,
Hong Kong, P.R.China
City: Hong Kong
Postal Code: /
Country: CHINA
Contact: Spring Zhou
Telephone +86 18116118237
E-mail: zhoucb1@lenovo.com

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)

3.1. About EUT

Description	Portable Tablet Computer
Model name	Lenovo TB-J606F
FCC ID	O57TBJ606F
WLAN Frequency Range	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.8 V

Note: Photographs of EUT are shown in ANNEX C of this test report. Components list, please refer



to documents of the manufacturer.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	HA16H66H	Lenovo TB-J606F	TB-J606F_RF01_200927
EUT2	HA16HRZ7	Lenovo TB-J606F	TB-J606F_RF01_200927
EUT3	HA1HE0L6	Lenovo TB-J606F	TB-J606F_RF01_210805
EUT4	HA1HFQ7R	Lenovo TB-J606F	TB-J606F_RF01_210805

*EUT ID: is used to identify the test sample in the lab internally.

3.1. Internal Identification of AE used during the test

4. AE ID*	Description	SN	Note
AE1-1	Charger	/	MC-201
AE1-2	Charger	/	MC-201
AE8	USB Cable	/	/
AE15	USB Cable	/	Liqi
AE9	Battery	/	SCUD
AE10	Battery	/	Sunwoda

AE1-1

Model	MC-201
Manufacturer	Acbel
Length of cable	/

AE1-2

Model	MC-201
Manufacturer	Chenyang
Length of cable	/

AE8

Model	USB Cable
Manufacturer	/
Length of cable	/

AE15

Model	L50B-05200100
Manufacturer	Liqi
Length of cable	/

AE9

Model	L20D2P32
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Manufacturer SCUD
 Capacitance 7500mAh
 Nominal voltage 3.86V

AE10

Model L20D2P32
 Manufacturer Sunwoda
 Capacitance 7500mAh
 Nominal voltage 3.86V

*AE ID: is used to identify the test sample in the lab internally.

4.1. General Description

The Equipment under Test (EUT) is a model of Portable Tablet Computer with Bluetooth, WLAN with integrated antenna and inbuilt battery.

It has Bluetooth (EDR)function.

It consists of normal options: travel charger, USB cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

4.2. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor k=2.

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

5. REFERENCE DOCUMENTS

5.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

5.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2018
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12



Federal Communications Commission Office of
Engineering and Technology Laboratory Division
GUIDANCE FOR COMPLIANCE MEASUREMENTS ON
KDB 558074 D01 DIGITAL TRANSMISSION SYSTEM, FREQUENCY 2019
HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID
SYSTEM DEVICES OPERATING UNDER SECTION
15.247 OF THE FCC RULES

6. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

7. SUMMARY OF TEST RESULTS

7.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	P
Peak Power Spectral Density	15.407	/	P
Occupied 26dB Bandwidth	15.403	/	P
Band edge compliance (Radiated)	15.209	/	P
Transmitter spurious emissions (Radiated)	15.407	/	P
AC Powerline Conducted Emission (150kHz- 30MHz)	15.407	/	P
Frequency Stability	15.407	/	P
99% Occupied bandwidth	/	/	P
Transmit Power Control	15.407	/	NA

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

7.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

All the test results are derived from test report No.I20Z61660-IOT08, except the result of output power,transmitter spurious emission,band edges-radiated,ac power-line conducted emission.

7.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature 26°C
 Voltage 3.8 V
 Humidity 44%

8. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	Rohde & Schwarz	1 year	2022-03-22
2	Test Receiver	ESCI	100766	Rohde & Schwarz	1 year	2022-03-09
3	Shielding Room	S81	/	ETS-Lindgren	/	/
4	Attenuator	10dB/2W	/	Rosenberger	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	1 year	2022-09-15
2	BiLog Antenna	VULB9163	514	Schwarzbeck	1 year	2022-03-22
3	Dual-Ridge Waveguide Horn Antenna	3117	00119024	ETS-Lindgren	1 year	2022-04-11

4	Test Receiver	FSV40	101047	Rohde & Schwarz	1 year	2022-06-02
5	EMI Antenna	LB-180400-25C-KF	2110084000006	A-INFO	1 year	2022-02-28

8. Measurement Uncertainty

8.1 Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

8.2 Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

8.3 Occupied Channel Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

8.4 Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

8.5 Spurious Emissions

Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

Radiated (k=2)

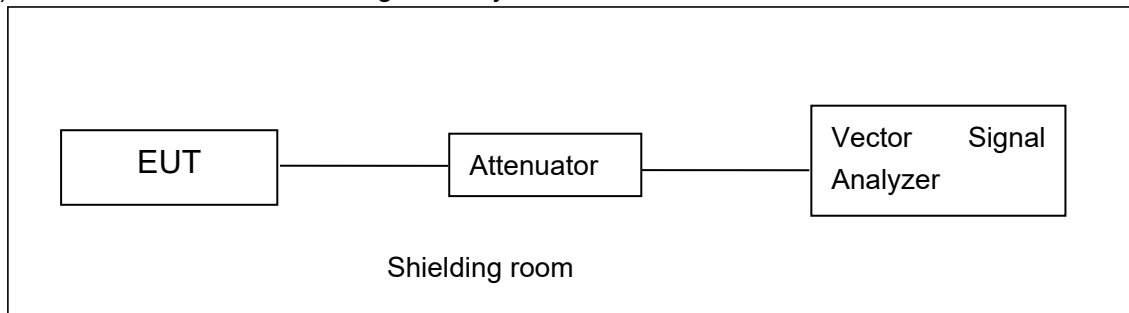
Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.40
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.32
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.26

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer

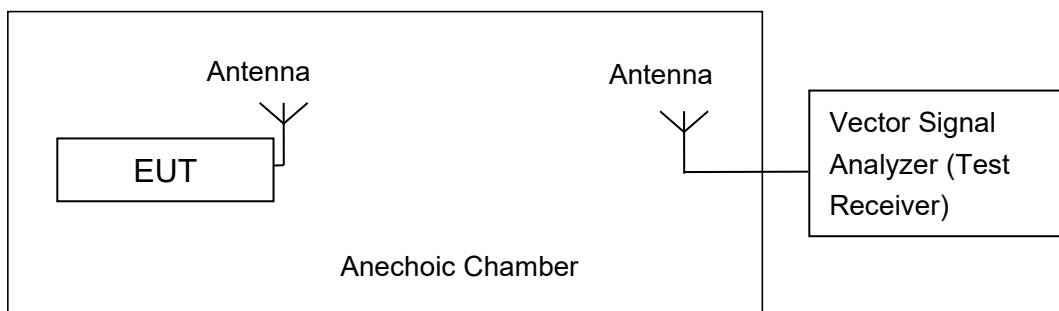


A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to KDB 789033

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

A.2. Maximum output Power

Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.

The measurement method SA-2 is made according to KDB 789033

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	14.33	/	/	/	/	/	/	/
	5200MHz	14.47	/	/	/	/	/	/	/
	5240MHz	14.89	/	/	/	/	/	/	/
	5260MHz	14.97	/	/	/	/	/	/	/
	5280MHz	15.06	/	/	/	/	/	/	/
	5320MHz	15.09	/	/	/	/	/	/	/
	5500MHz	15.40	/	/	/	/	/	/	/
	5580MHz	15.39	/	/	/	/	/	/	/
	5700MHz	15.34	/	/	/	/	/	/	/
	5720MHz	15.33	/	/	/	/	/	/	/

The data rate 6Mbps is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT20 mode



Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz	13.73	/	/	/	/	/	/	/
	5200MHz	13.84	/	/	/	/	/	/	/
	5240MHz	14.13	/	/	/	/	/	/	/
	5260MHz	14.22	/	/	/	/	/	/	/
	5280MHz	14.32	/	/	/	/	/	/	/
	5320MHz	14.39	/	/	/	/	/	/	/
	5500MHz	14.70	/	/	/	/	/	/	/
	5580MHz	14.67	/	/	/	/	/	/	/
	5700MHz	14.50	/	/	/	/	/	/	/
	5720MHz	14.39	/	/	/	/	/	/	/

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (HT20)	5180MHz	14.07	/	/	/	/	/	/	/	/
	5200MHz	14.25	/	/	/	/	/	/	/	/
	5240MHz	14.62	/	/	/	/	/	/	/	/
	5260MHz	14.73	/	/	/	/	/	/	/	/
	5280MHz	14.83	/	/	/	/	/	/	/	/
	5320MHz	14.86	/	/	/	/	/	/	/	/
	5500MHz	15.18	/	/	/	/	/	/	/	/
	5580MHz	15.15	/	/	/	/	/	/	/	/
	5700MHz	15.11	/	/	/	/	/	/	/	/
	5720MHz	15.30	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT40)	5190MHz	13.92	/	/	/	/	/	/	/
	5230MHz	14.15	/	/	/	/	/	/	/
	5270MHz	14.56	/	/	/	/	/	/	/
	5310MHz	14.68	/	/	/	/	/	/	/



	5510MHz	15.00	/	/	/	/	/	/	/	/
	5550MHz	15.02	/	/	/	/	/	/	/	/
	5670MHz	15.04	/	/	/	/	/	/	/	/
	5710MHz	15.11	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT40 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT40)	5190MHz	13.56	/	/	/	/	/	/	/	/	/
	5230MHz	13.79	/	/	/	/	/	/	/	/	/
	5270MHz	14.17	/	/	/	/	/	/	/	/	/
	5310MHz	14.29	/	/	/	/	/	/	/	/	/
	5510MHz	14.59	/	/	/	/	/	/	/	/	/
	5550MHz	14.61	/	/	/	/	/	/	/	/	/
	5670MHz	14.61	/	/	/	/	/	/	/	/	/
	5710MHz	14.78	/	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (HT80)	5210MHz	14.00	/	/	/	/	/	/	/	/	/
	5290MHz	14.52	/	/	/	/	/	/	/	/	/
	5530MHz	14.85	/	/	/	/	/	/	/	/	/
	5610MHz	14.93	/	/	/	/	/	/	/	/	/
		5690MHz	14.80	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

A.3. Peak Power Spectral Density (conducted)

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	11
	5250MHz~5350MHz	11
	5470MHz~5725MHz	11

The output power measurement method Section F is made according to KDB 789033

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	6.35	P
	5200 MHz	6.28	P
	5240 MHz	6.22	P
	5260 MHz	6.28	P
	5280 MHz	6.20	P
	5320 MHz	6.24	P
	5500 MHz	6.29	P
	5580 MHz	6.01	P
	5700 MHz	6.00	P
802.11n HT20	5180 MHz	6.00	P
	5200 MHz	5.31	P
	5240 MHz	5.37	P
	5260 MHz	5.14	P
	5280 MHz	5.15	P
	5320 MHz	5.15	P
	5500 MHz	5.11	P
	5580 MHz	5.03	P
	5700 MHz	5.01	P
802.11ac HT20	5180 MHz	5.02	P
	5200 MHz	5.03	P
	5240 MHz	5.15	P
	5260 MHz	5.16	P
	5280 MHz	5.11	P
	5320 MHz	5.10	P
	5500 MHz	5.02	P
	5580 MHz	5.02	P
	5700 MHz	5.03	P
802.11n HT40	5190 MHz	4.30	P
	5230 MHz	4.35	P
	5270 MHz	4.32	P
	5310 MHz	4.33	P
	5510 MHz	4.24	P
	5550 MHz	4.25	P
	5670 MHz	4.27	P
802.11ac HT40	5190 MHz	4.40	P
	5230 MHz	4.39	P
	5270 MHz	4.33	P
	5310 MHz	4.33	P
	5510 MHz	4.31	P

	5550 MHz	4.30	P
	5670 MHz	4.30	P
802.11ac HT80	5210MHz	4.30	P
	5290MHz	4.30	P
	5530MHz	4.09	P
	5610MHz	4.09	P

Conclusion: PASS

A.4. Occupied 26dB Bandwidth(conducted)

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.403 (i)	/

The measurement is made according to KDB 789033

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
-------------------------	---------

Measurement Result:

Mode	Frequency	Occupied 26dB Bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.1	24.20	P
	5200 MHz	Fig.2	23.90	P
	5240 MHz	Fig.3	25.15	P
	5260 MHz	Fig.4	25.10	P
	5280 MHz	Fig.5	24.35	P
	5320 MHz	Fig.6	24.40	P
	5500 MHz	Fig.7	23.95	P
	5580 MHz	Fig.8	23.85	P
	5700 MHz	Fig.9	23.90	P
		5720 MHz	Fig.10	23.70
802.11n HT20	5180 MHz	Fig.11	25.00	P
	5200 MHz	Fig.12	25.15	P
	5240 MHz	Fig.13	25.15	P
	5260 MHz	Fig.14	25.20	P
	5280 MHz	Fig.15	25.10	P
	5320 MHz	Fig.16	24.70	P



	5500 MHz	Fig.17	25.40	P
	5580 MHz	Fig.18	24.40	P
	5700 MHz	Fig.19	24.29	P
	5720 MHz	Fig.20	25.35	P
802.11ac HT20	5180 MHz	Fig.21	25.15	P
	5200 MHz	Fig.22	24.25	P
	5240 MHz	Fig.23	25.15	P
	5260 MHz	Fig.24	24.85	P
	5280 MHz	Fig.25	24.60	P
	5320 MHz	Fig.26	25.25	P
	5500 MHz	Fig.27	25.35	P
	5580 MHz	Fig.28	24.25	P
	5700 MHz	Fig.29	25.40	P
	5720 MHz	Fig.30	24.29	P

802.11n HT40	5190 MHz	Fig.31	41.76	P
	5230 MHz	Fig.32	41.52	P
	5270 MHz	Fig.33	41.84	P
	5310 MHz	Fig.34	41.76	P
	5510 MHz	Fig.35	42.00	P
	5550 MHz	Fig.36	41.84	P
	5670 MHz	Fig.37	41.84	P
	5710 MHz	Fig.38	41.76	P
802.11ac HT40	5190 MHz	Fig.39	41.84	P
	5230 MHz	Fig.40	41.68	P
	5270 MHz	Fig.41	41.92	P
	5310 MHz	Fig.42	41.92	P
	5510 MHz	Fig.43	41.84	P
	5550 MHz	Fig.44	41.92	P
	5670 MHz	Fig.45	41.92	P
	5710 MHz	Fig.46	41.75	P
802.11ac HT80	5210MHz	Fig.47	84.00	P
	5290MHz	Fig.48	84.00	P
	5530MHz	Fig.49	84.00	P
	5610MHz	Fig.50	83.84	P
	5690MHz	Fig.51	84.00	P

Conclusion: PASS

Test graphs as below:

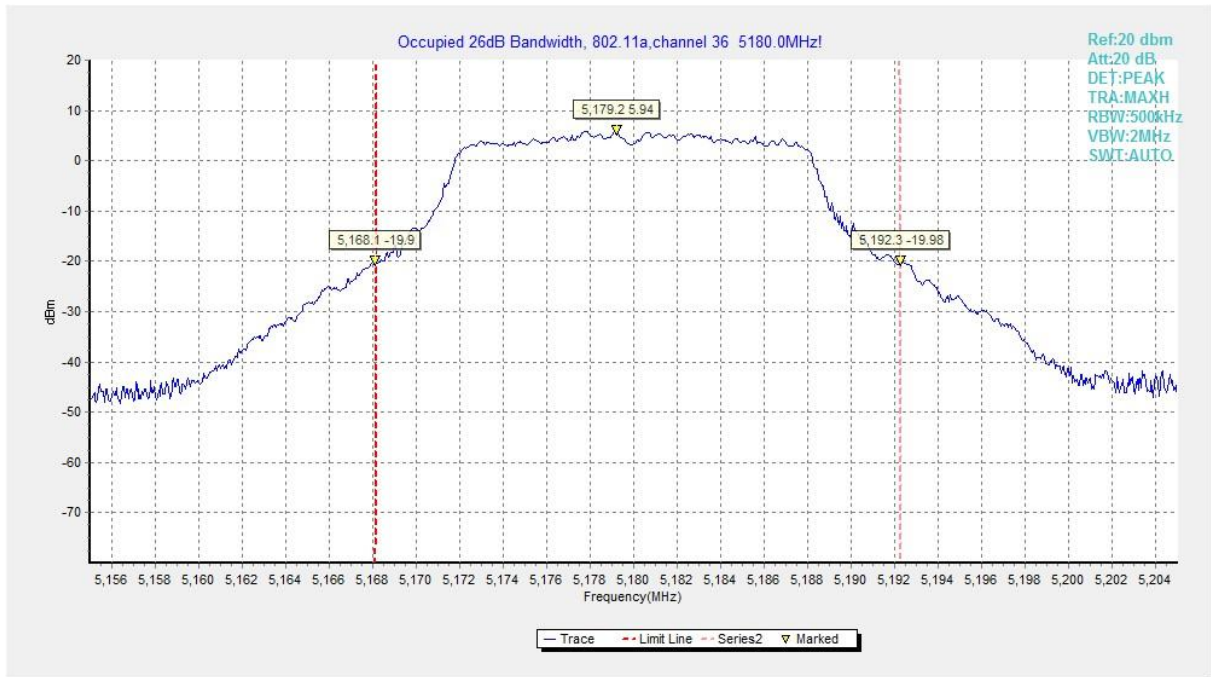


Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)



Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)



Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

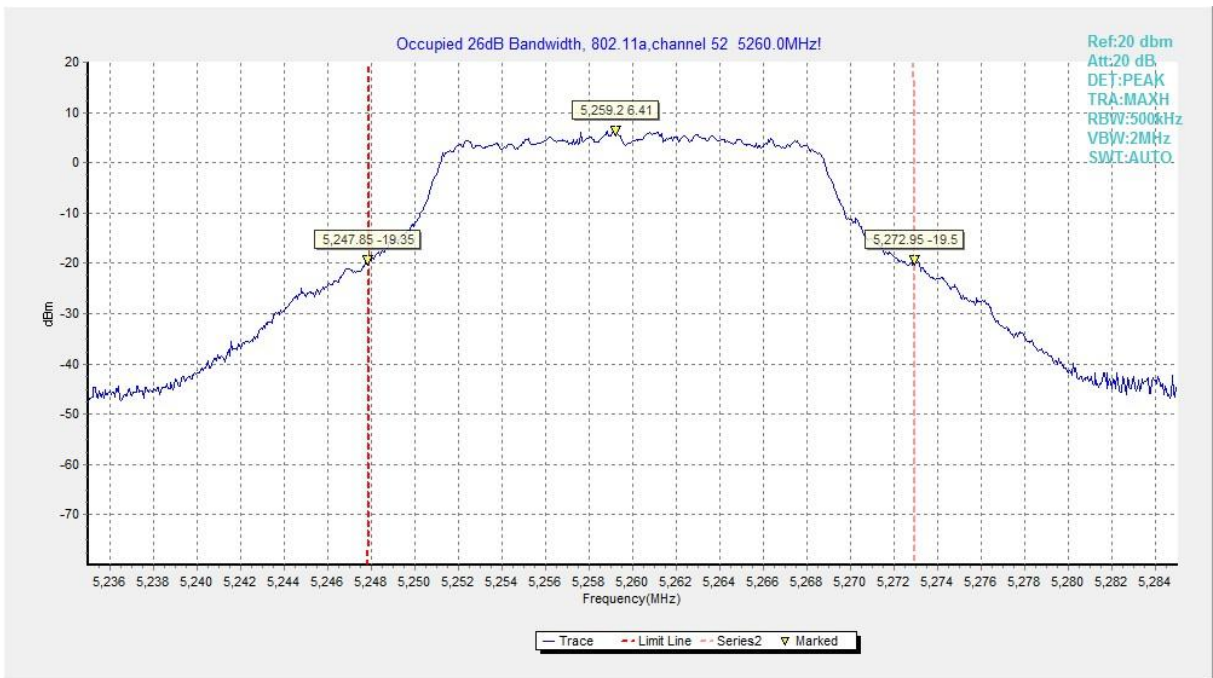


Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

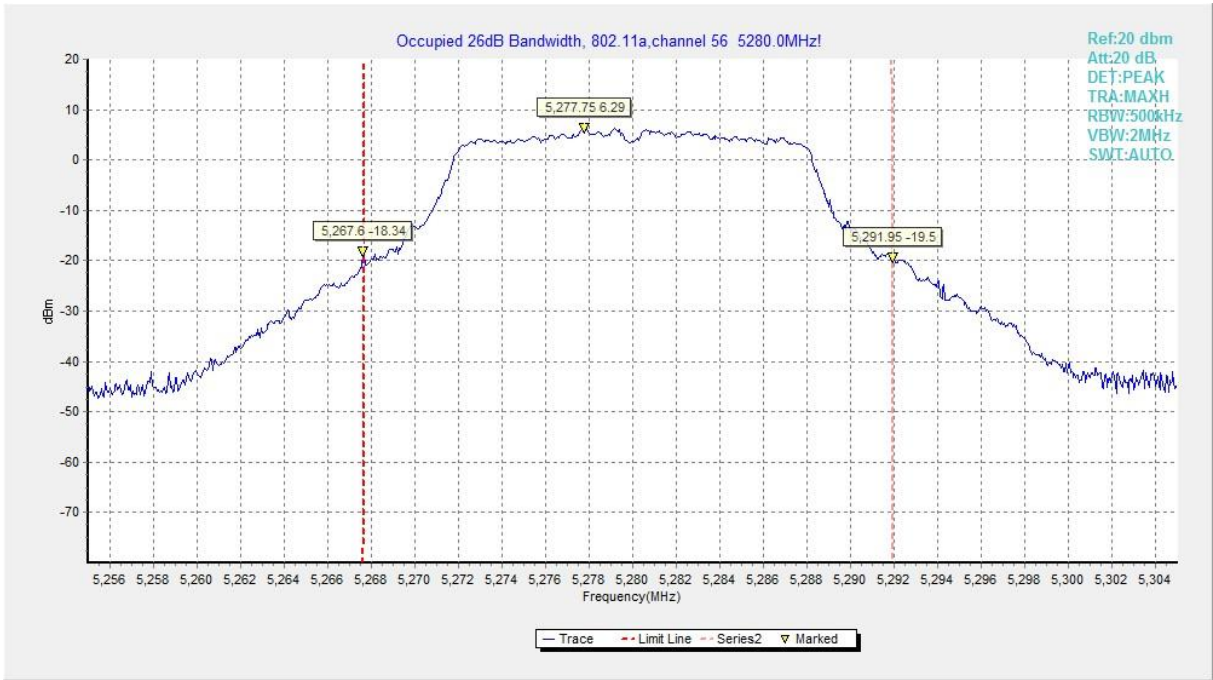


Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)



Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

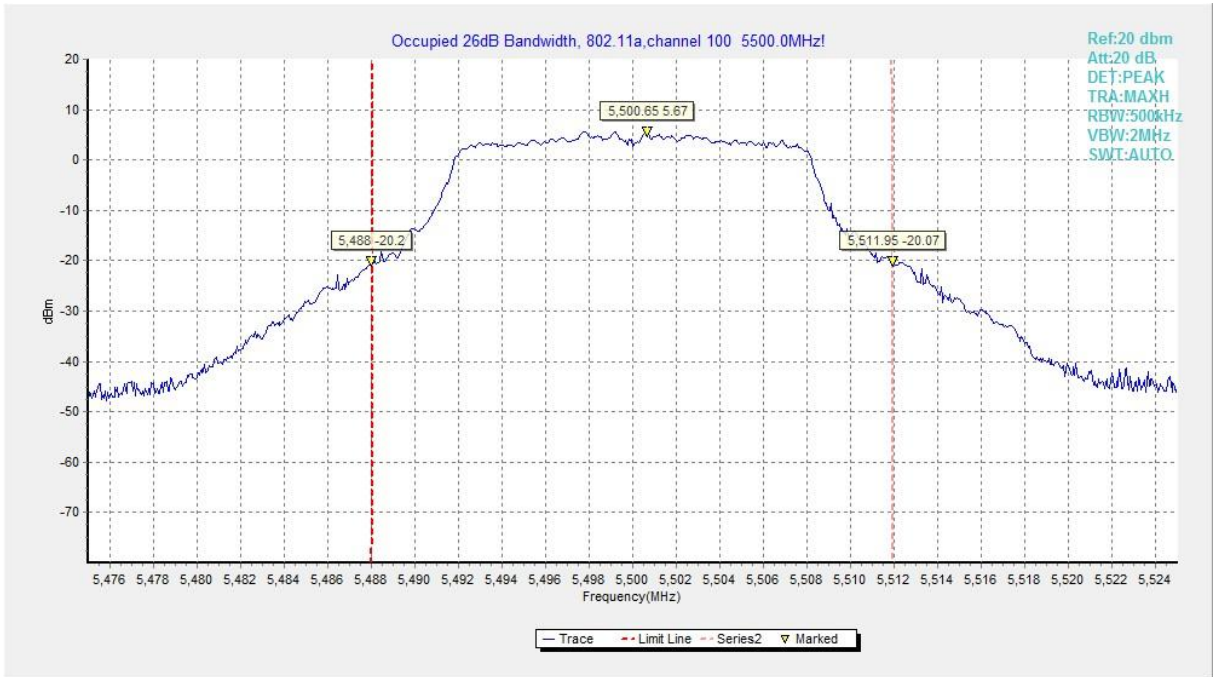


Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

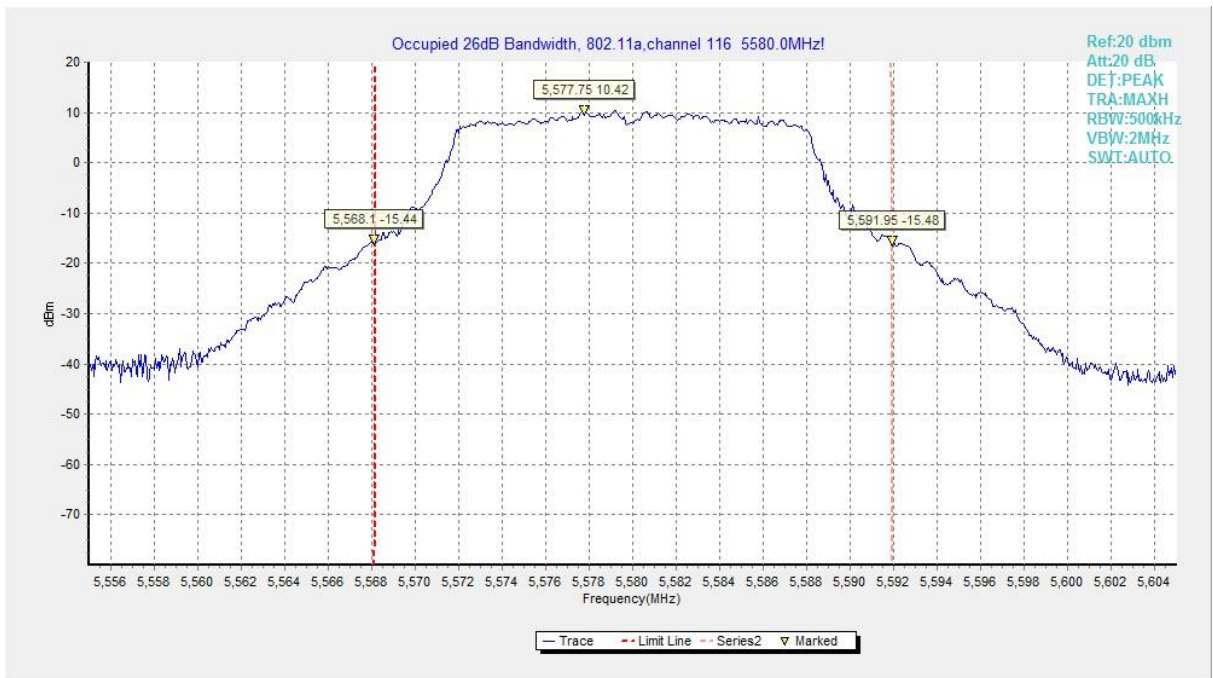


Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)



Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

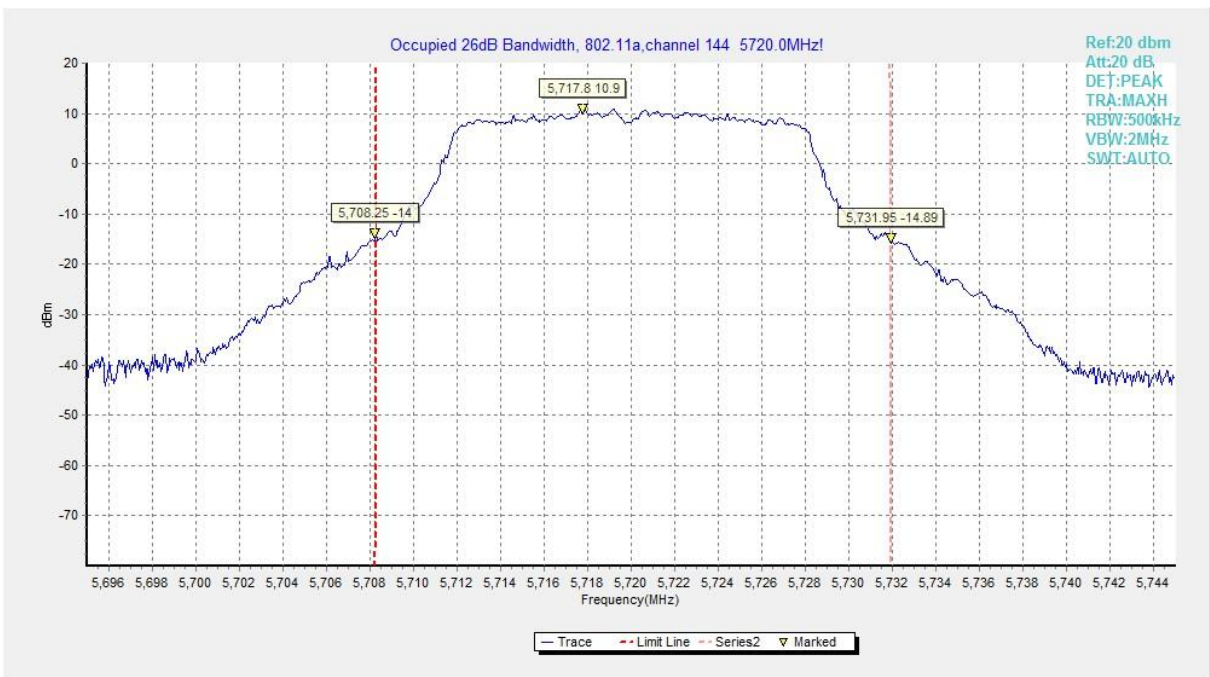


Fig.10 Occupied 26dB Bandwidth (802.11a, 5720MHz)

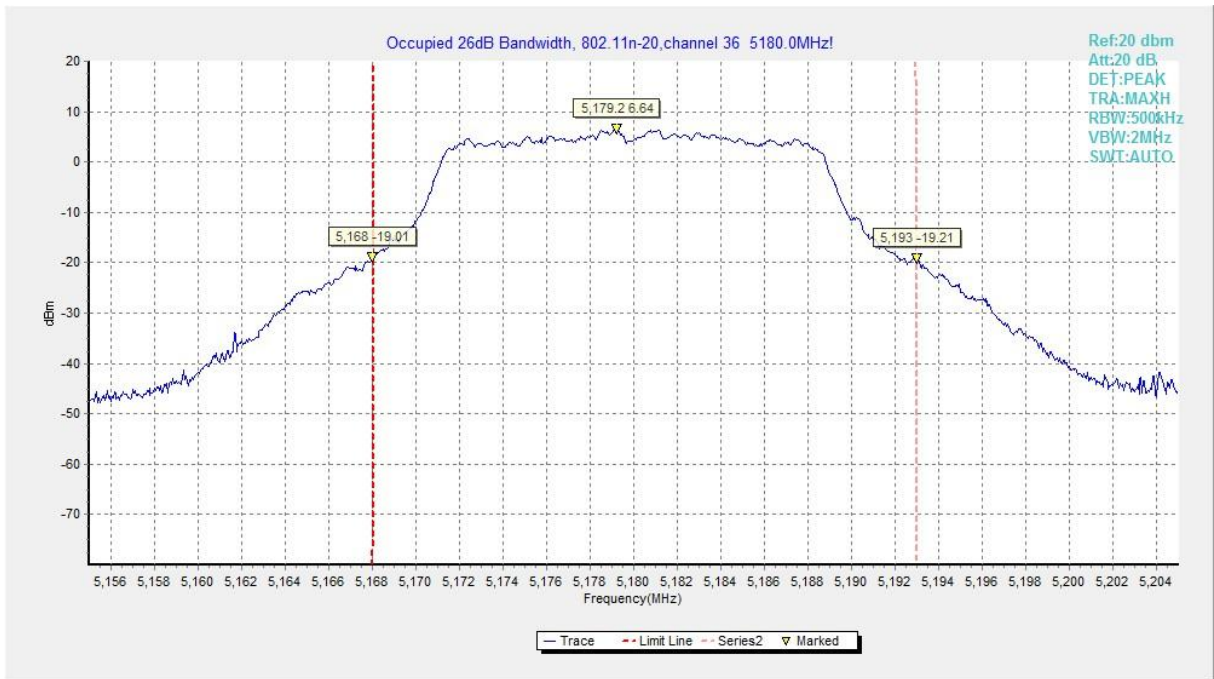


Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

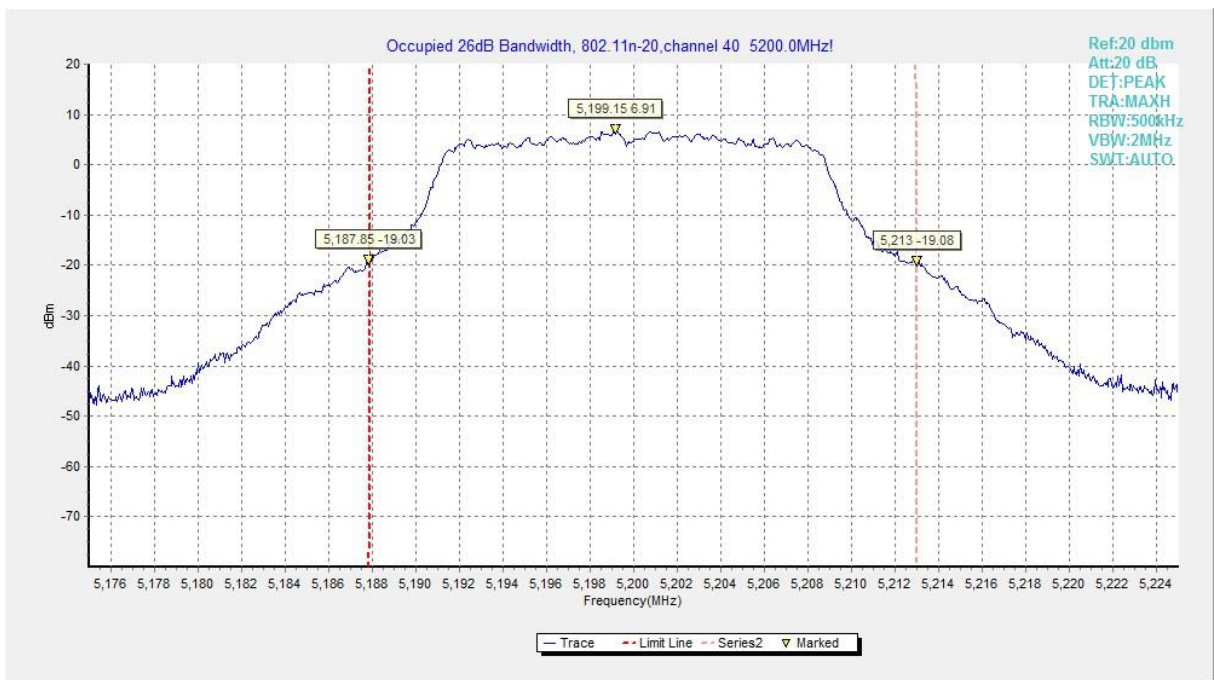


Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)



Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

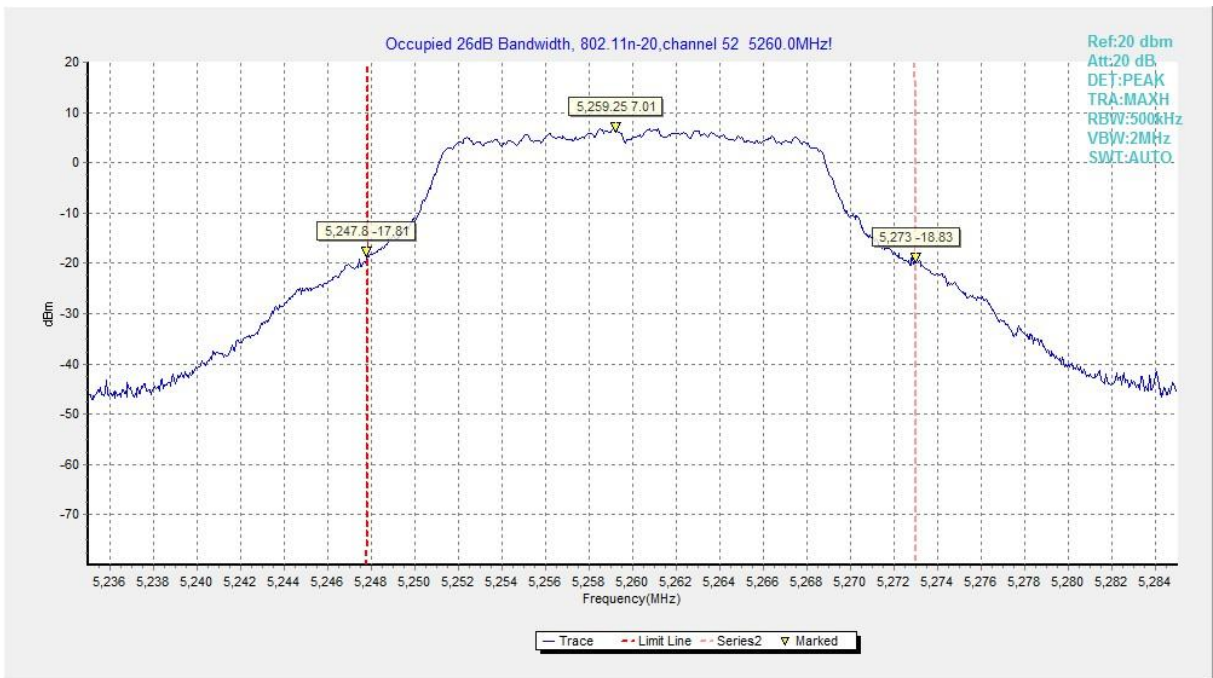


Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

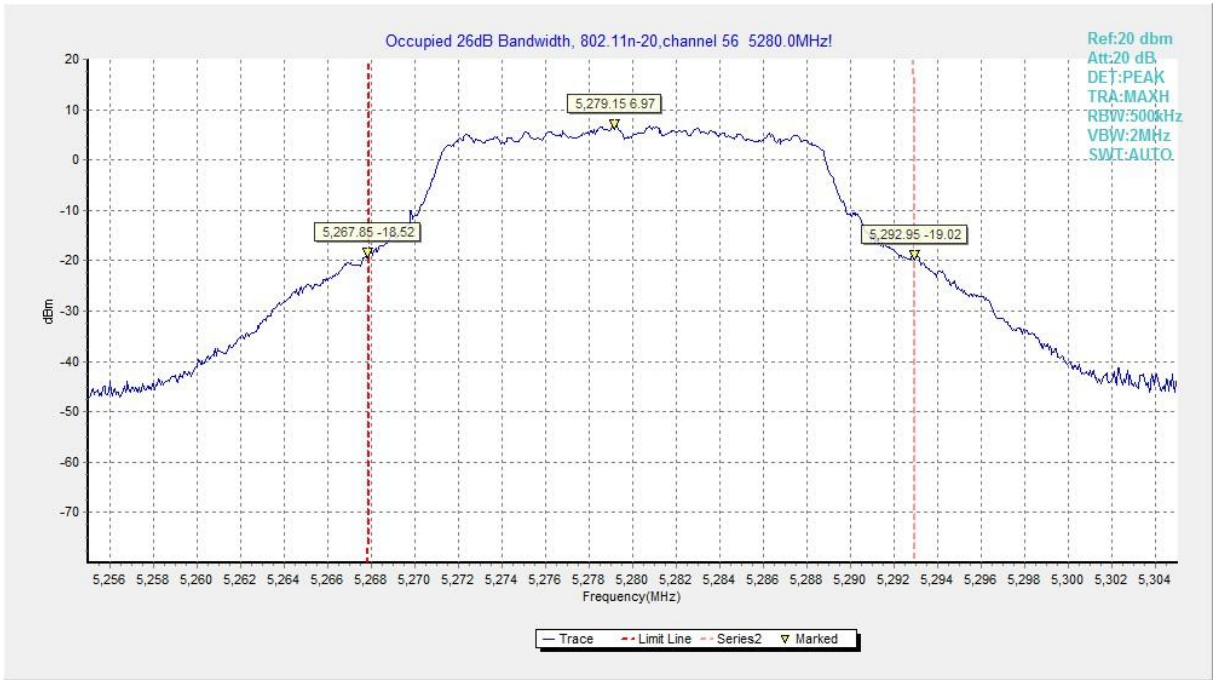


Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

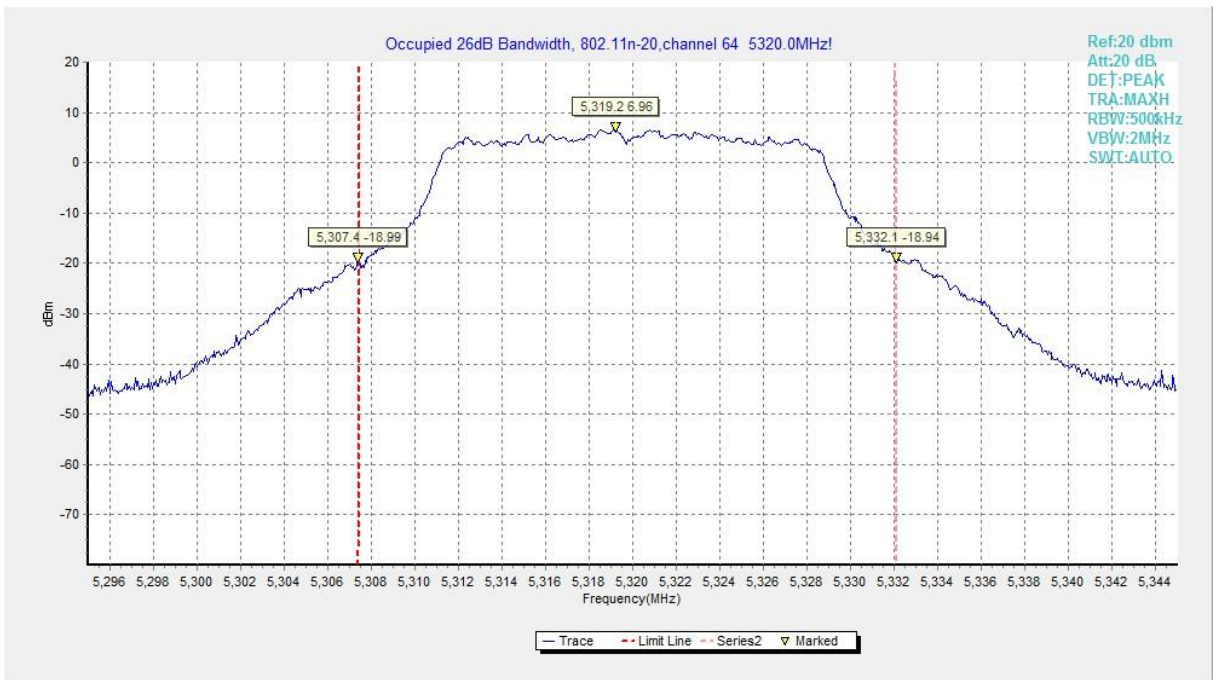


Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

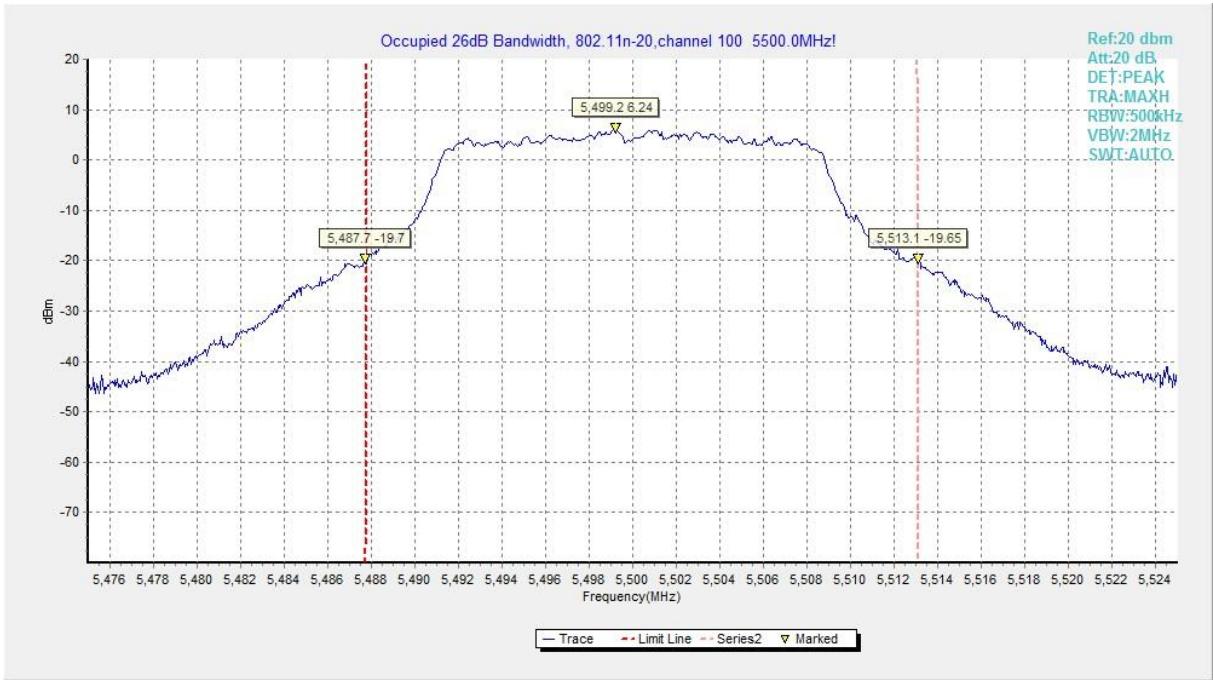


Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)



Fig.18 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

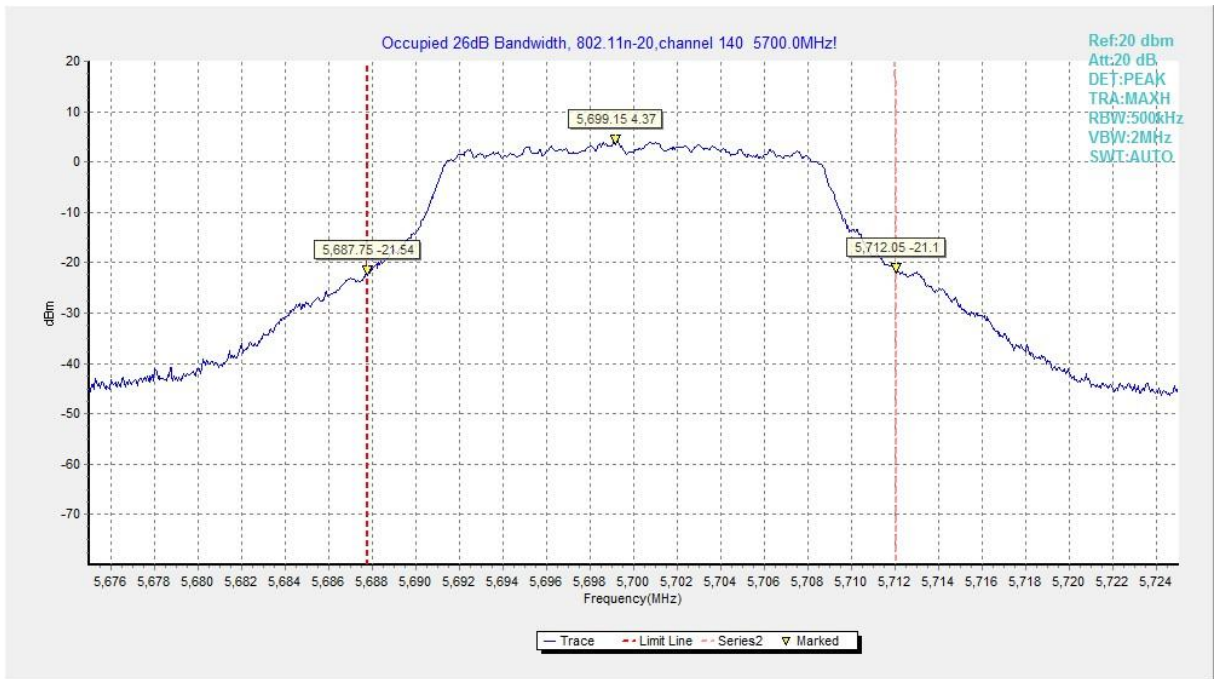


Fig.19 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

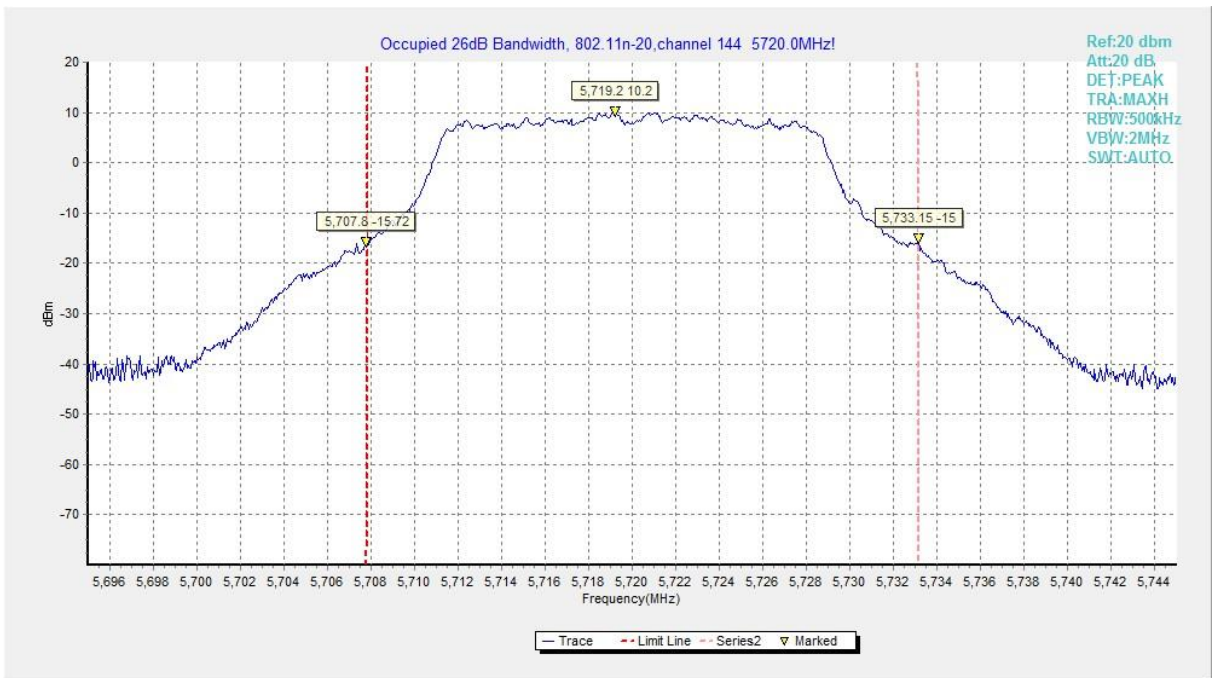


Fig.20 Occupied 26dB Bandwidth (802. 11n-HT20, 5720MHz)

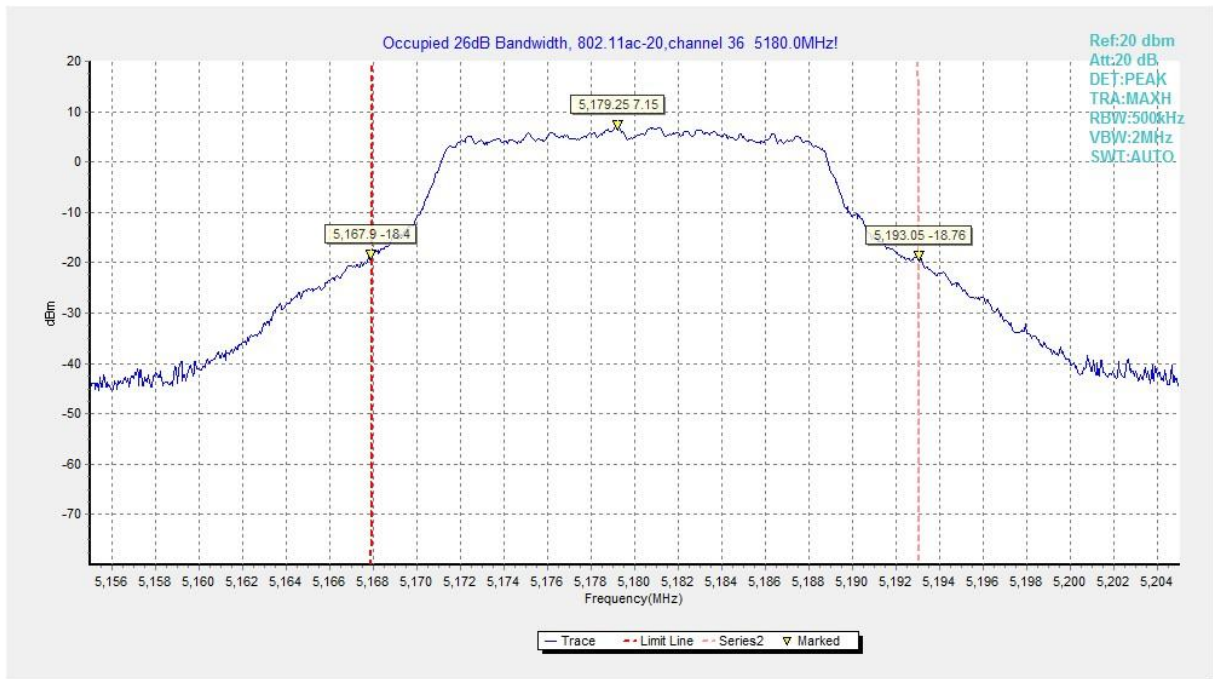


Fig.21 Occupied 26dB Bandwidth (802.11ac-HT20, 5180MHz)

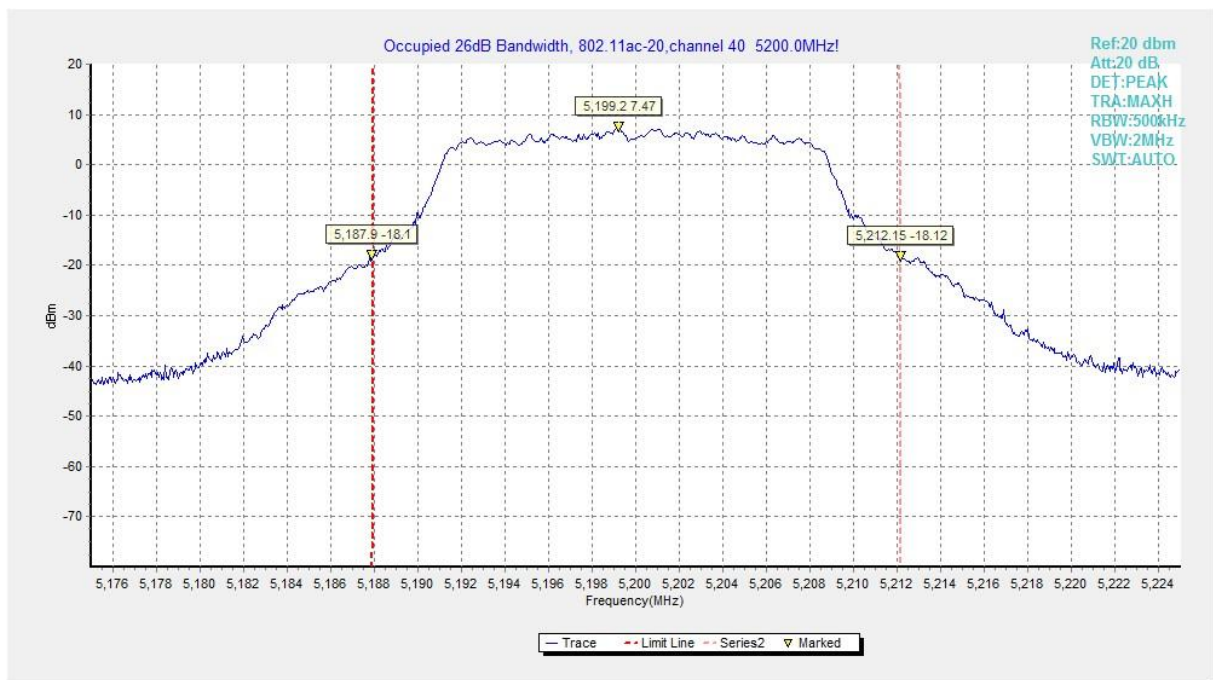


Fig.22 Occupied 26dB Bandwidth (802.11ac-HT20, 5200MHz)

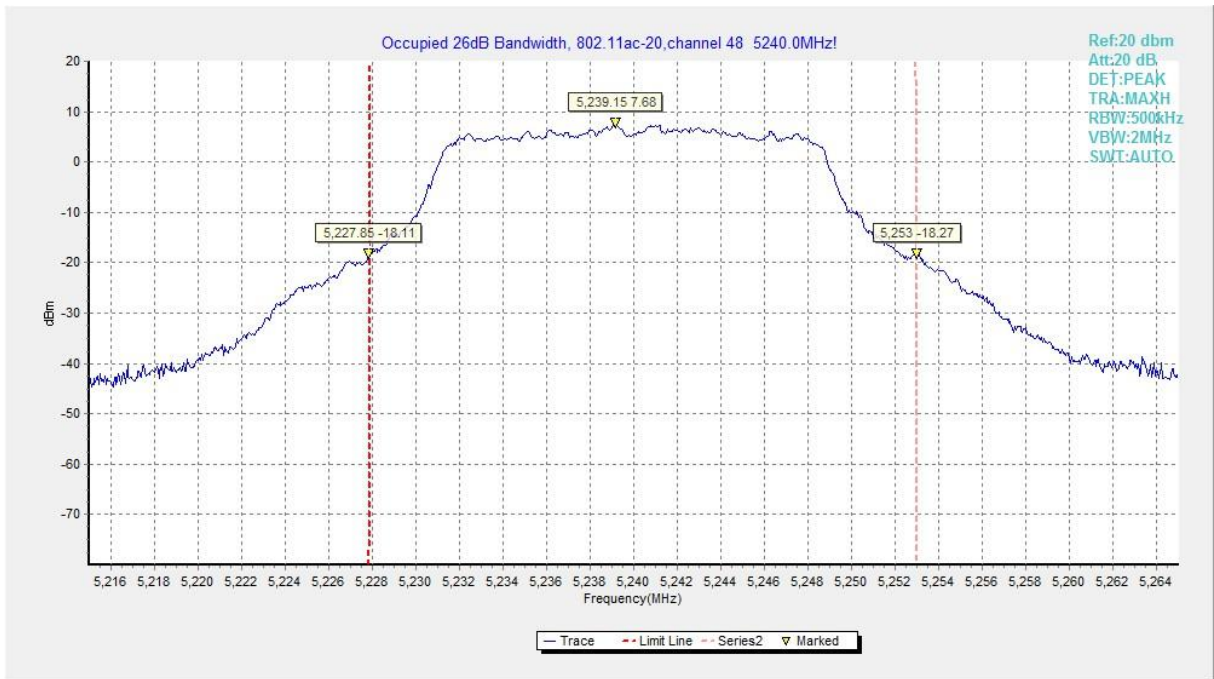


Fig.23 Occupied 26dB Bandwidth (802.11ac-HT20, 5240MHz)

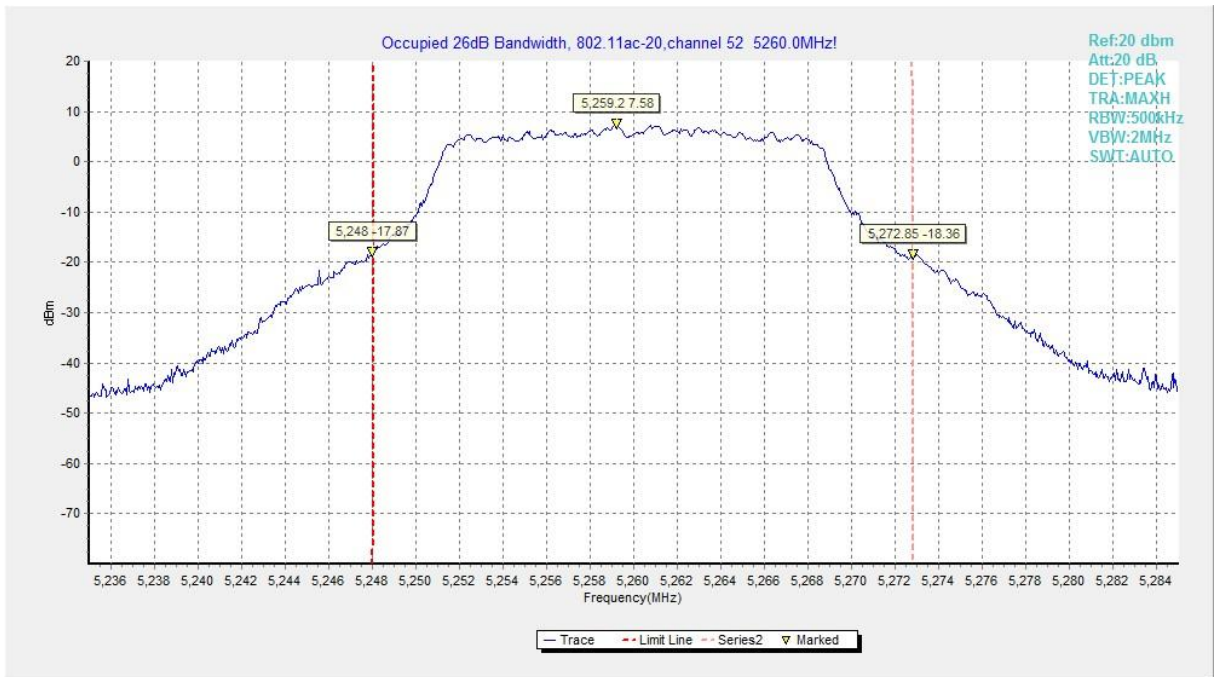


Fig.24 Occupied 26dB Bandwidth (802.11ac-HT20, 5260MHz)

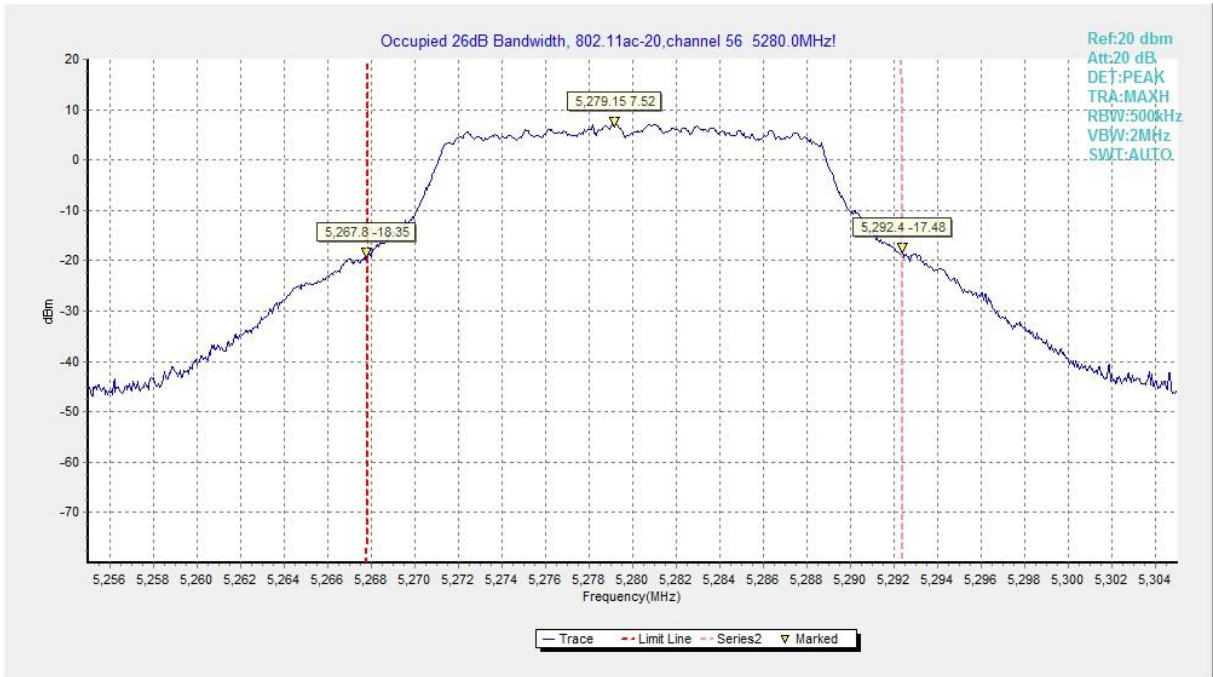


Fig.25 Occupied 26dB Bandwidth (802.11ac-HT20, 5280MHz)

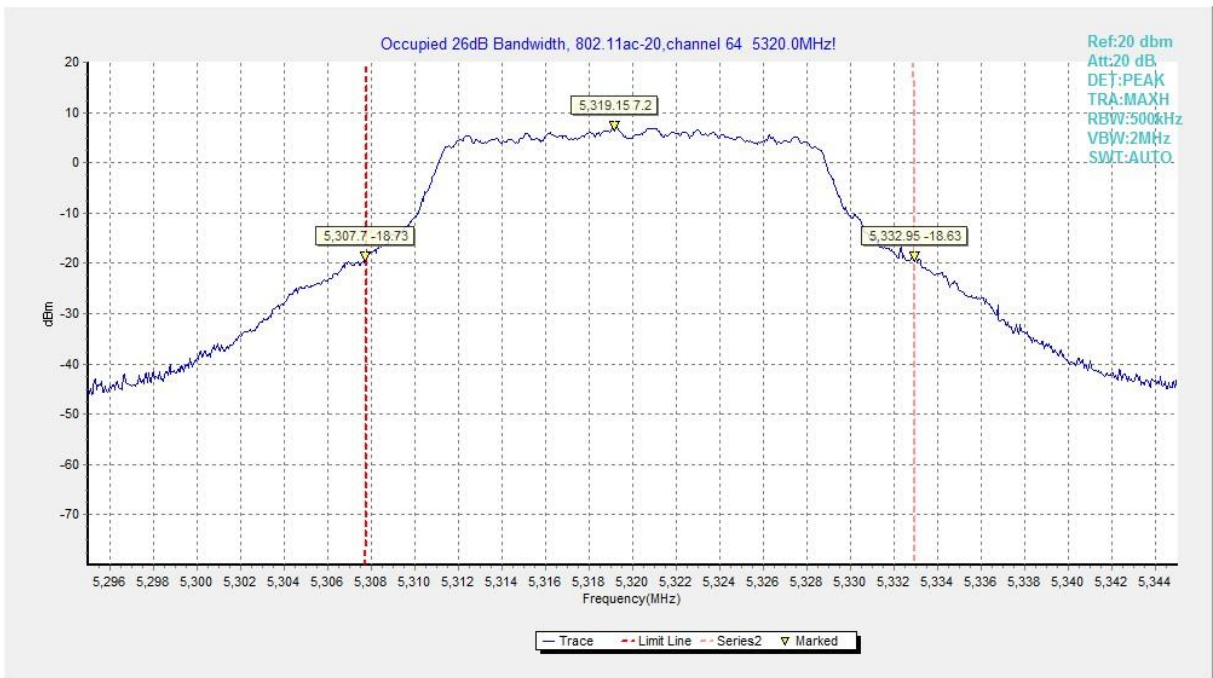


Fig.26 Occupied 26dB Bandwidth (802.11ac-HT20, 5320MHz)

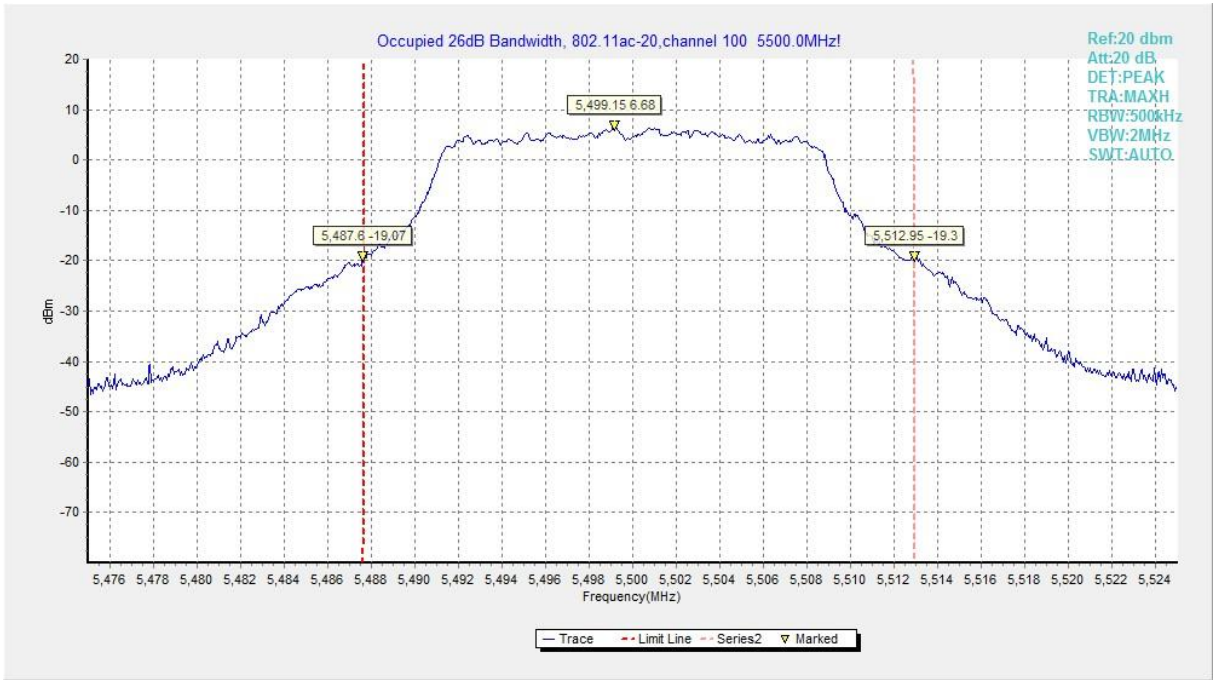


Fig.27 Occupied 26dB Bandwidth (802. 11ac-HT20, 5500MHz)

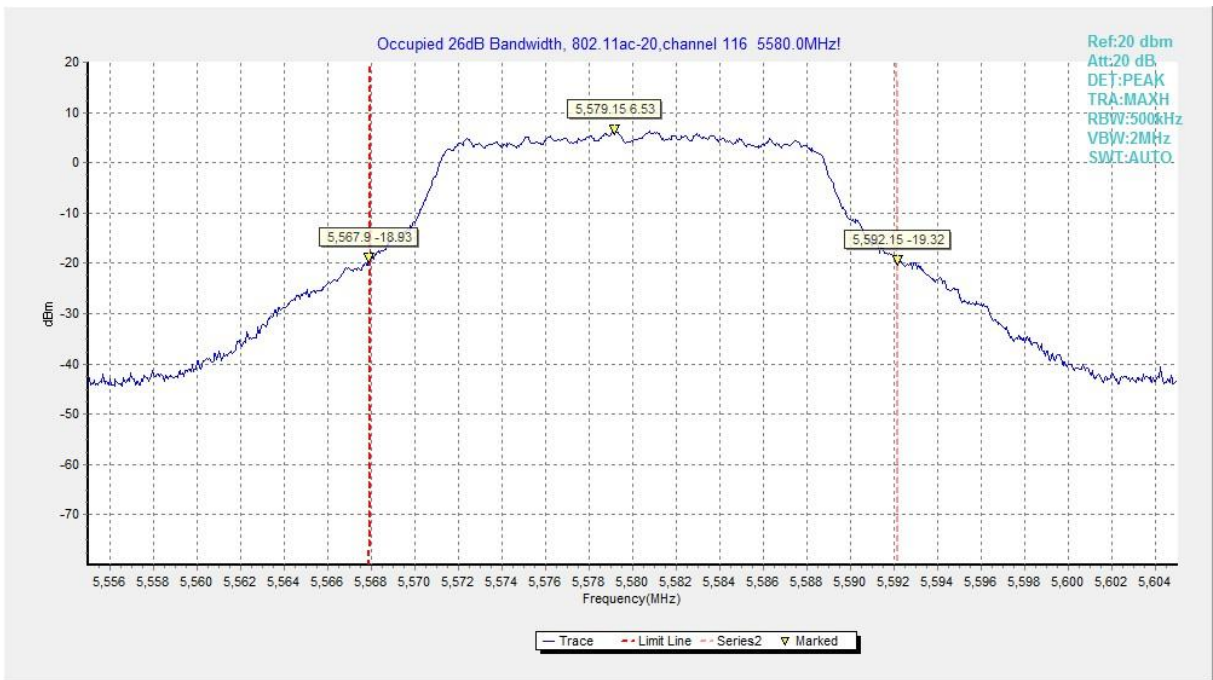


Fig.28 Occupied 26dB Bandwidth (802. 11ac-HT20, 5580MHz)

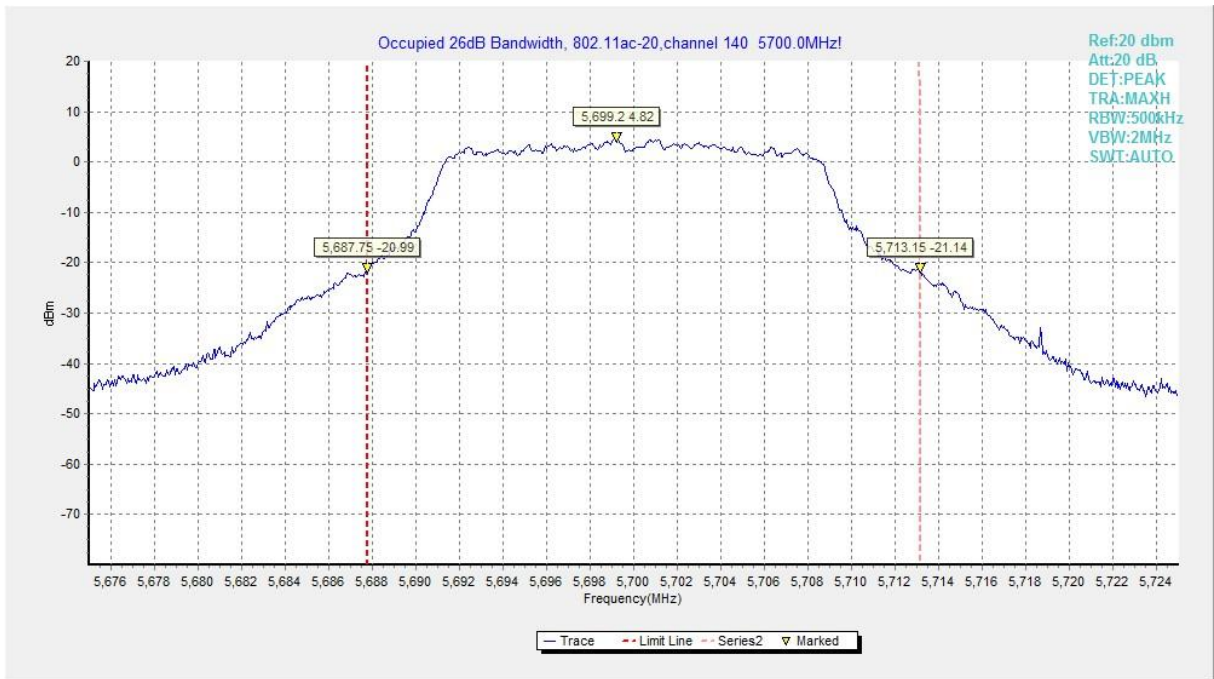


Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT20, 5700MHz)

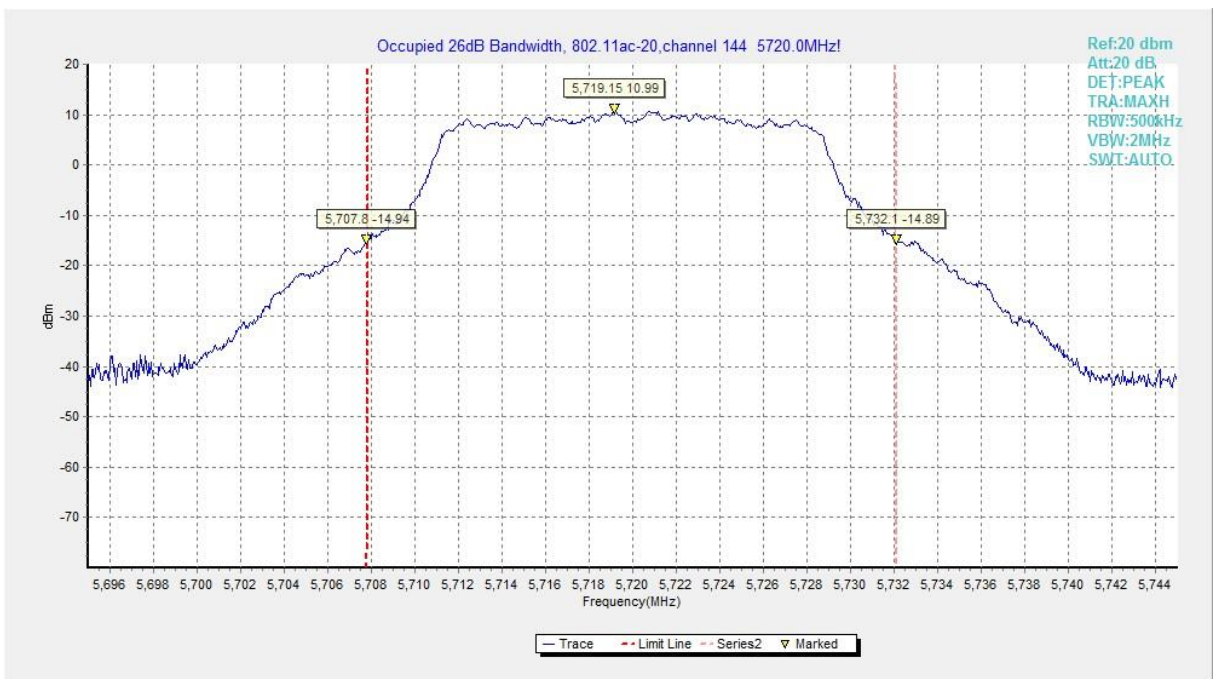


Fig.30 Occupied 26dB Bandwidth (802. 11ac-HT20, 5720MHz)

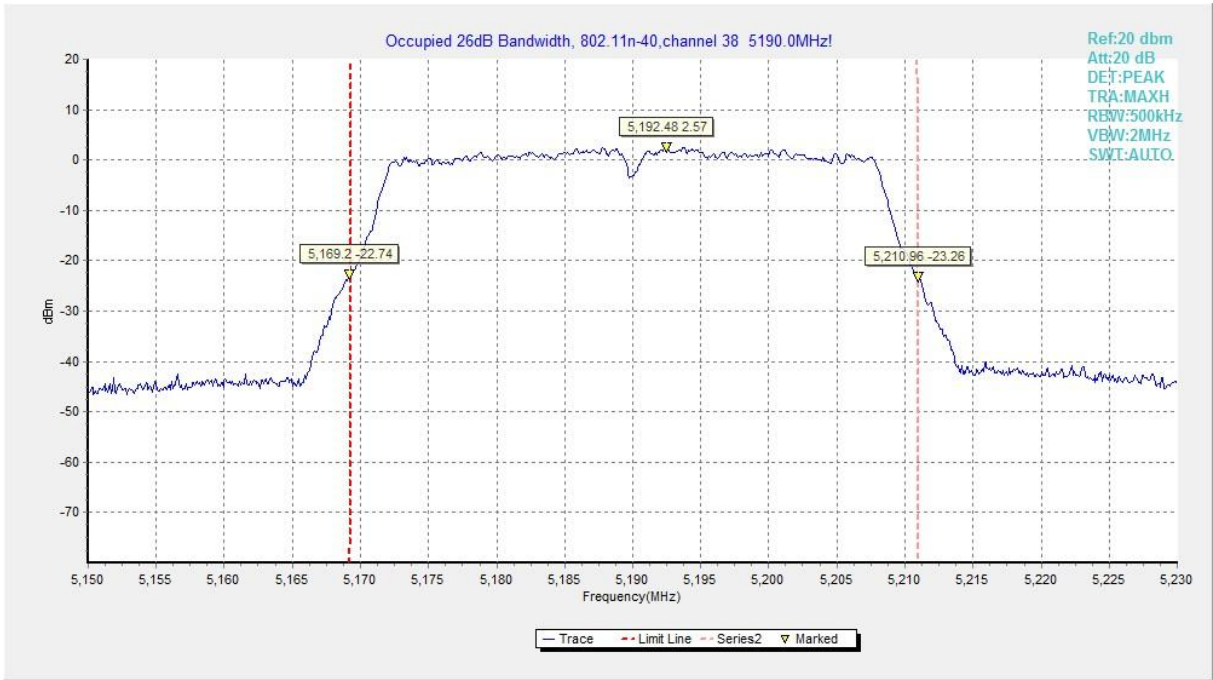


Fig.31 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

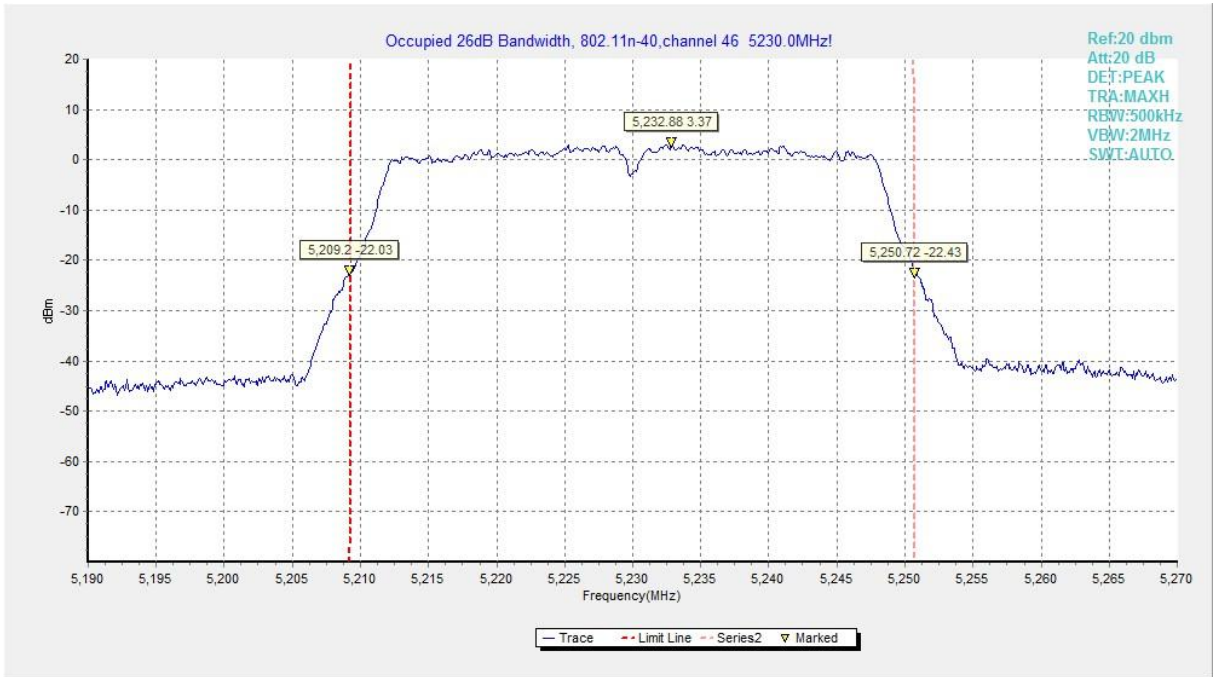


Fig.32 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

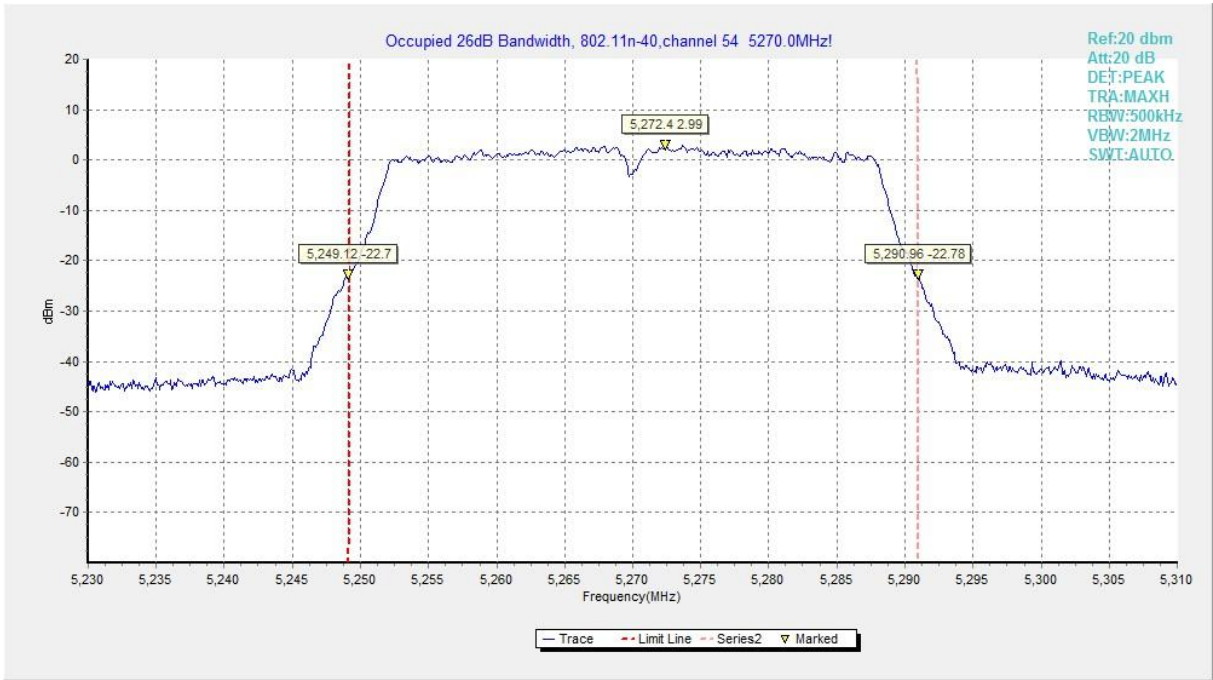


Fig.33 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

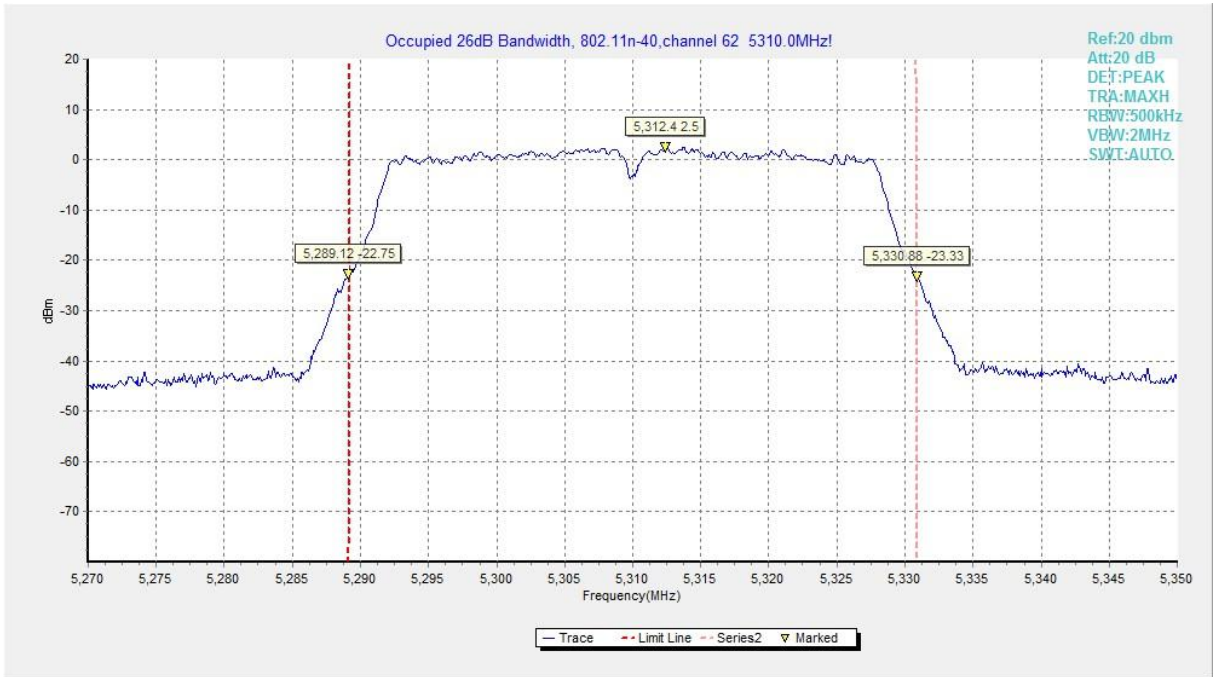


Fig.34 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

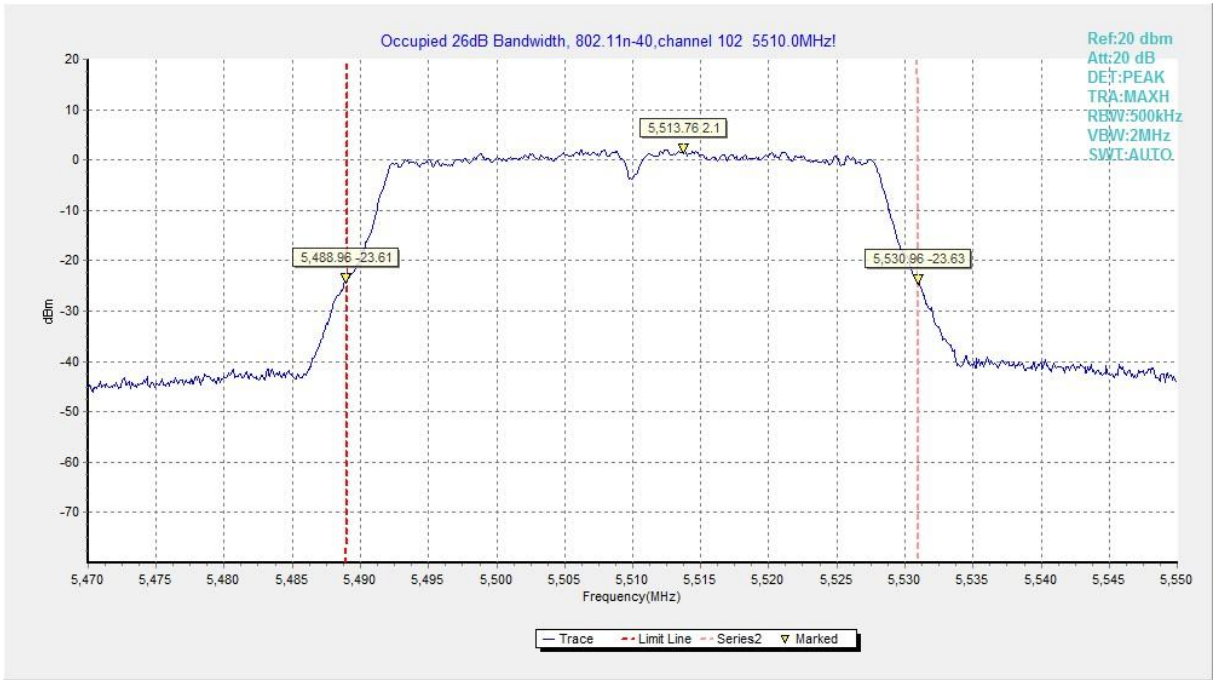


Fig.35 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

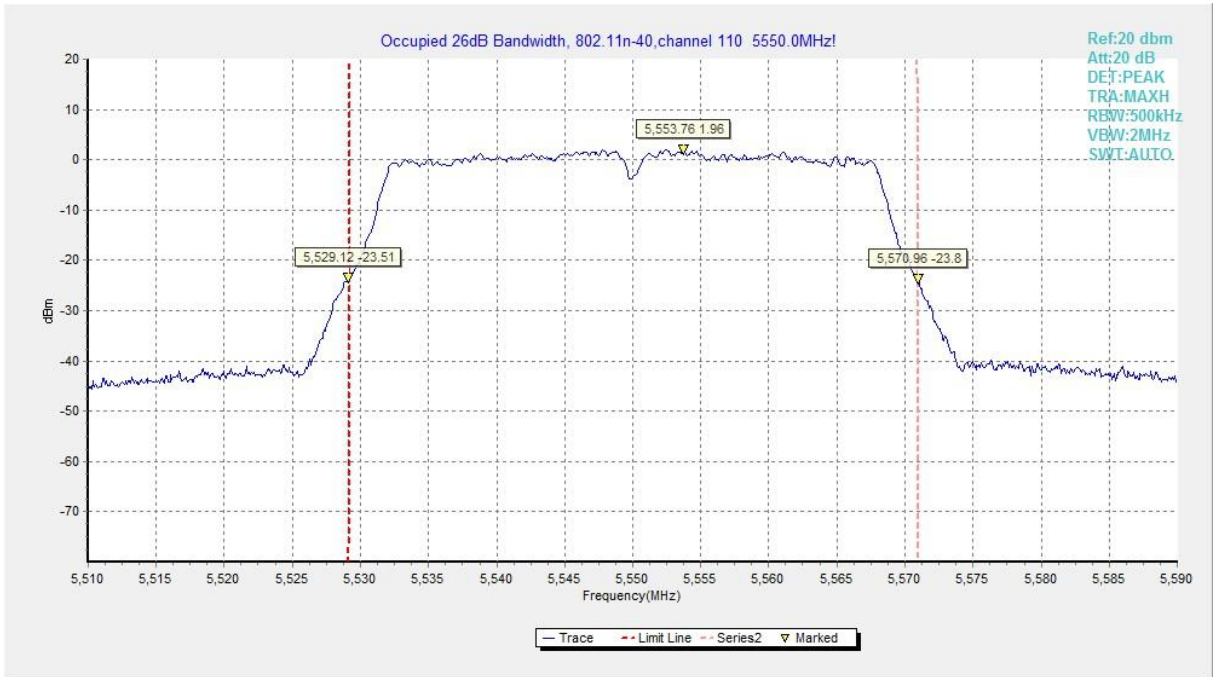


Fig.36 Occupied 26dB Bandwidth (802. 11n-HT40, 5550MHz)

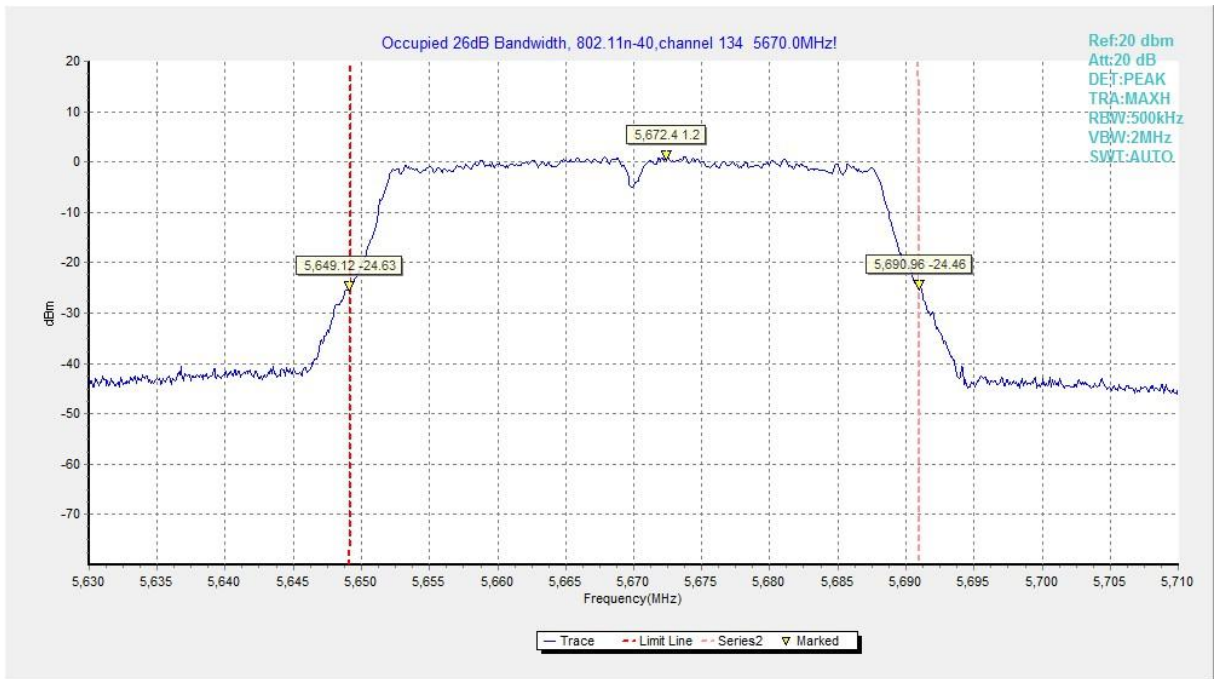


Fig.37 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

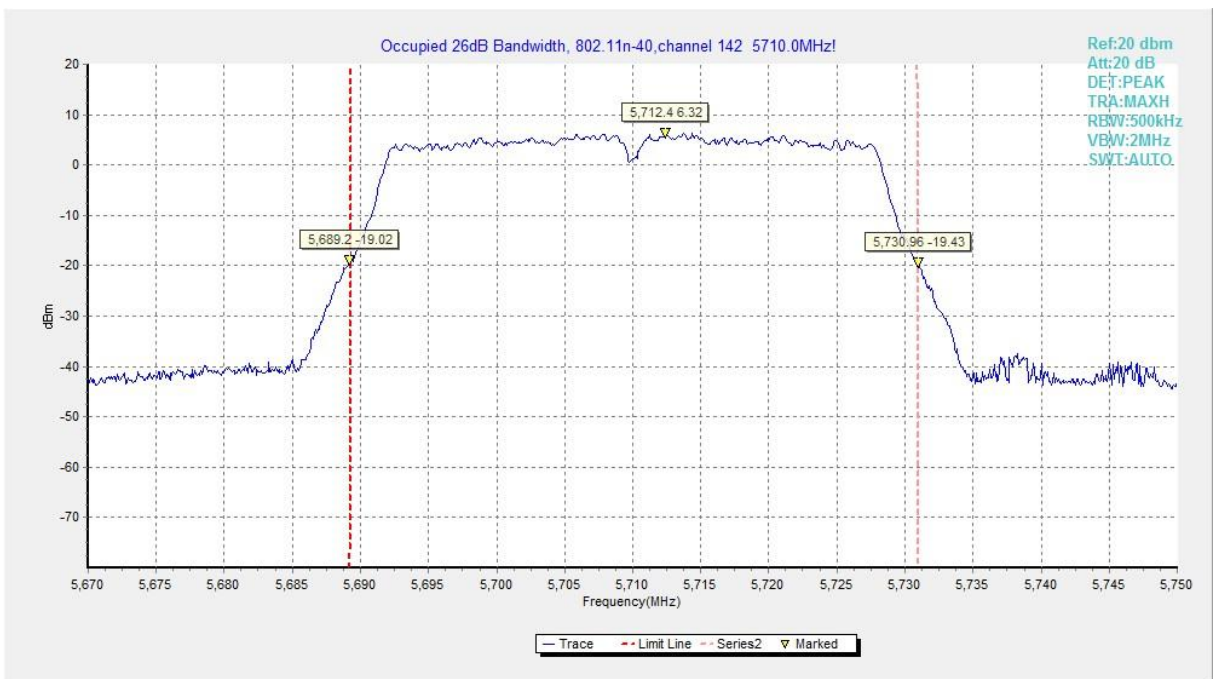


Fig.38 Occupied 26dB Bandwidth (802. 11n-HT40, 5710MHz)

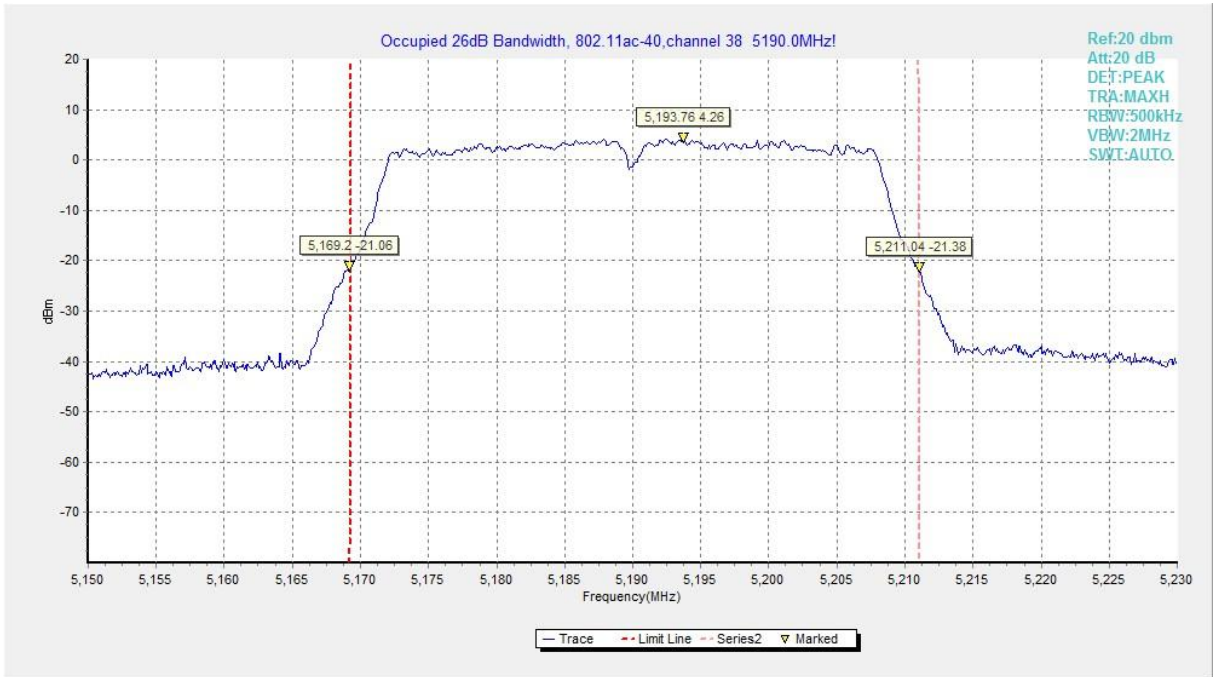


Fig.39 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

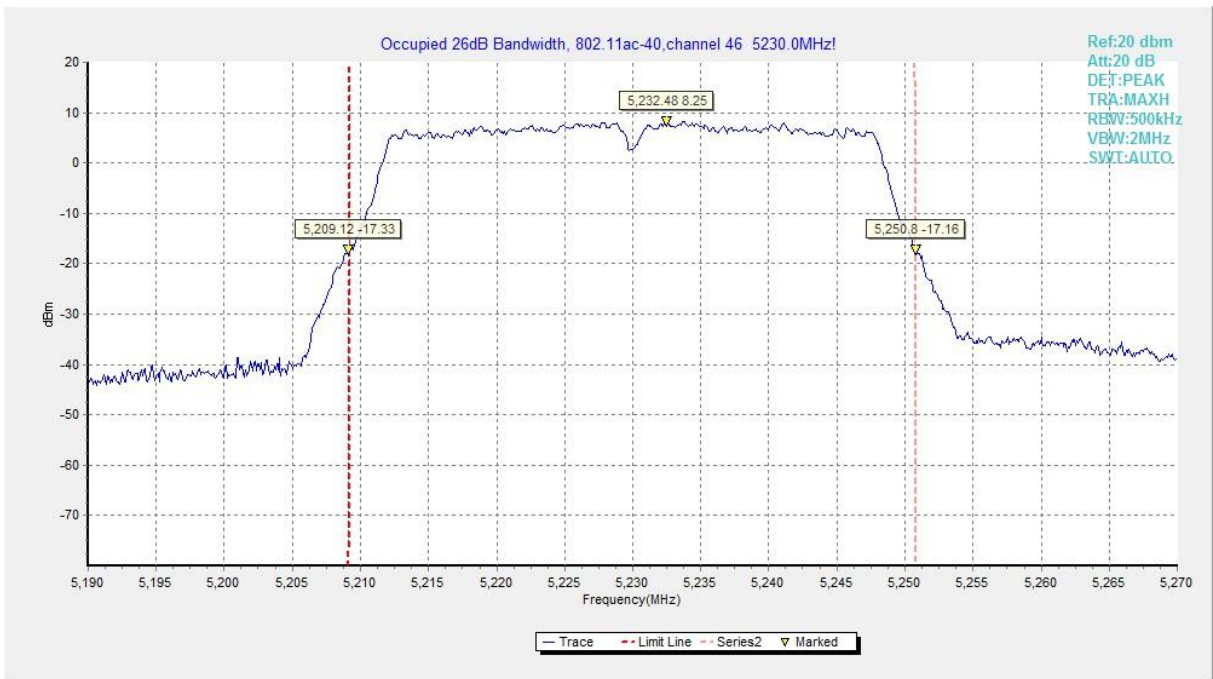


Fig.40 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

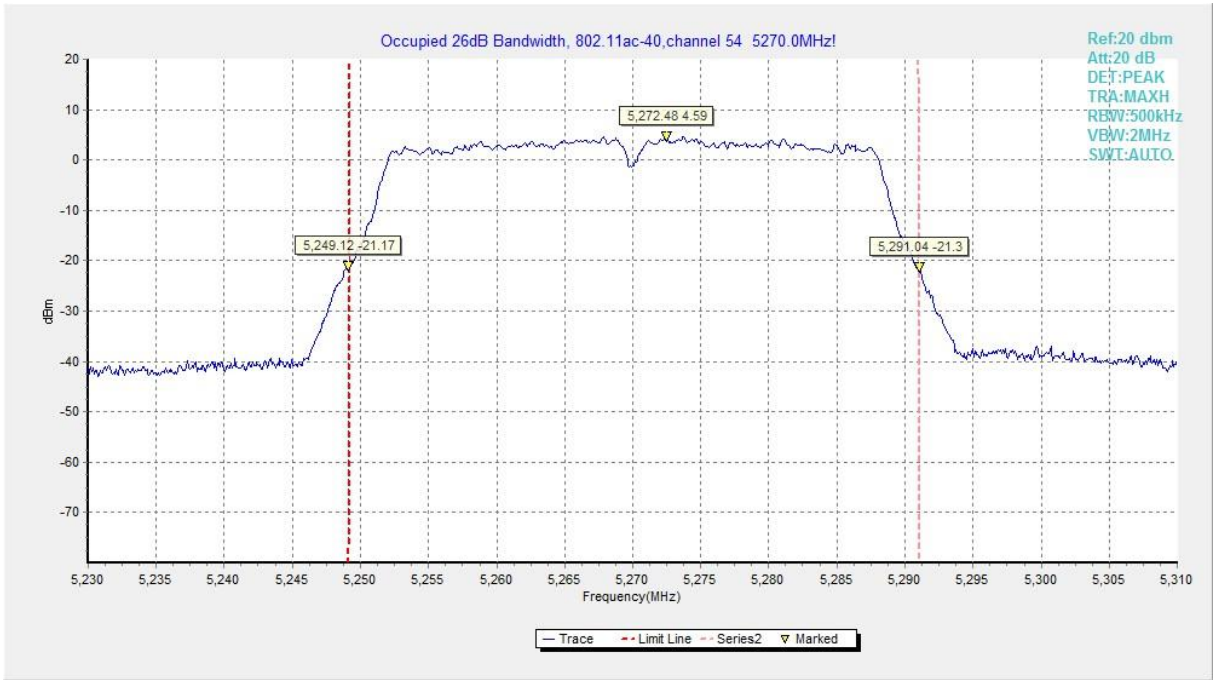


Fig.41 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

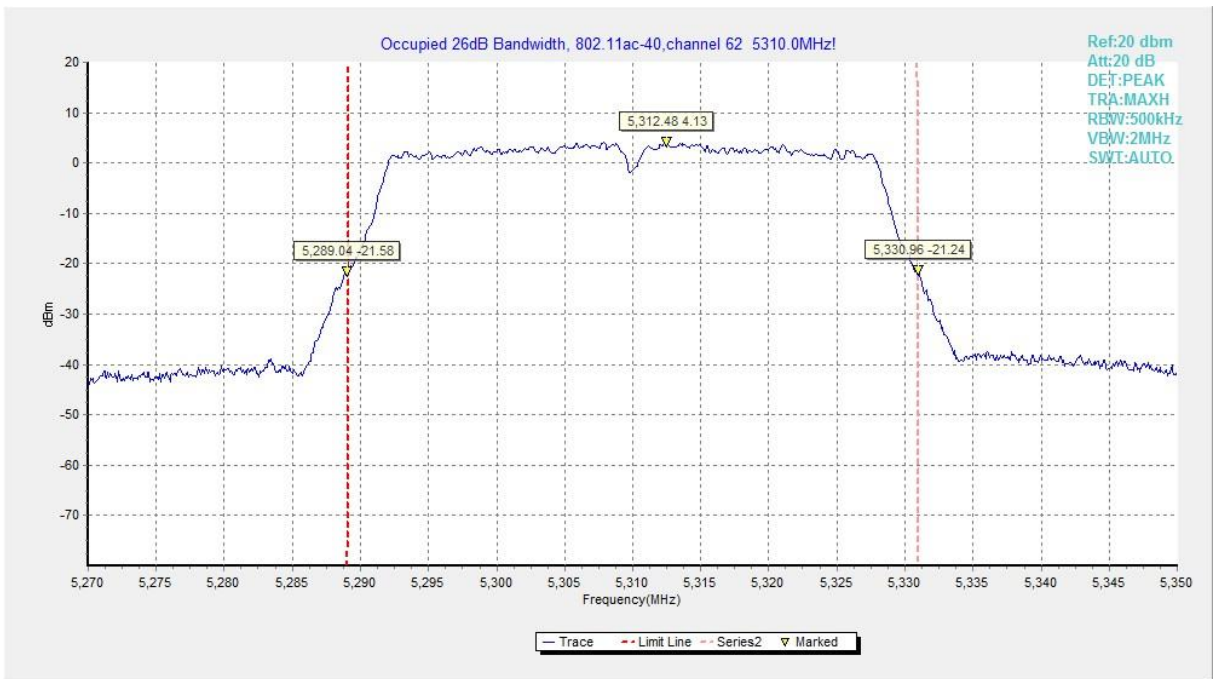


Fig.42 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

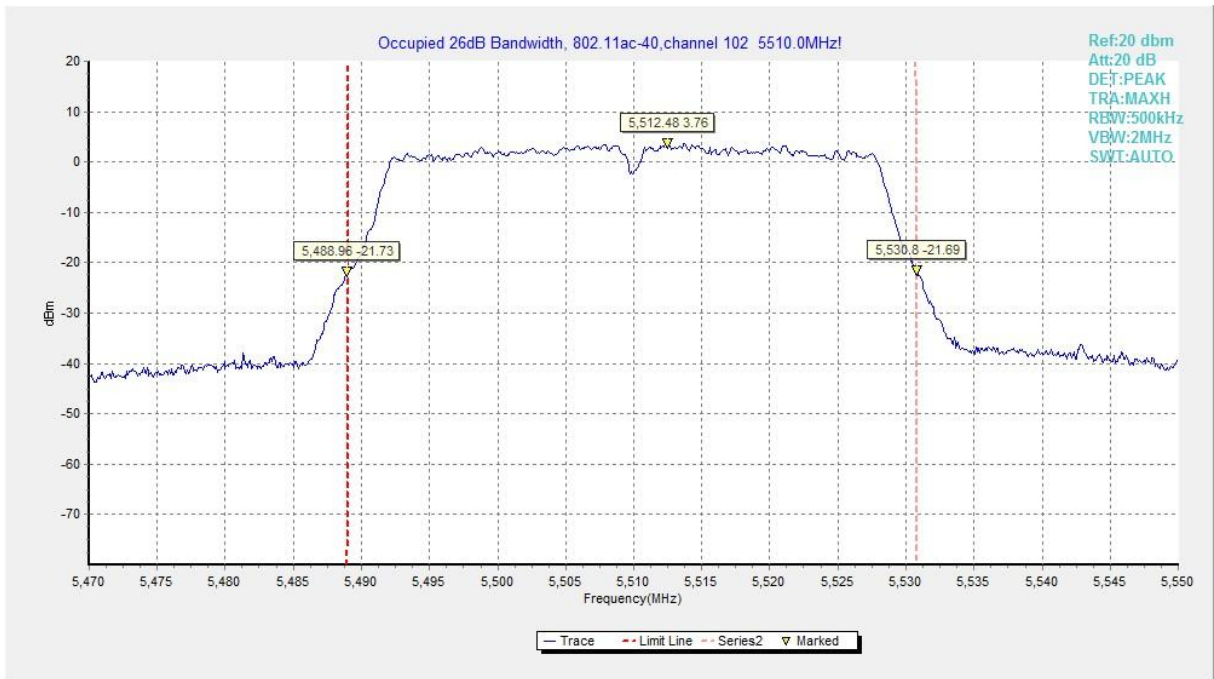


Fig.43 Occupied 26dB Bandwidth (802.11ac-HT40, 5510MHz)

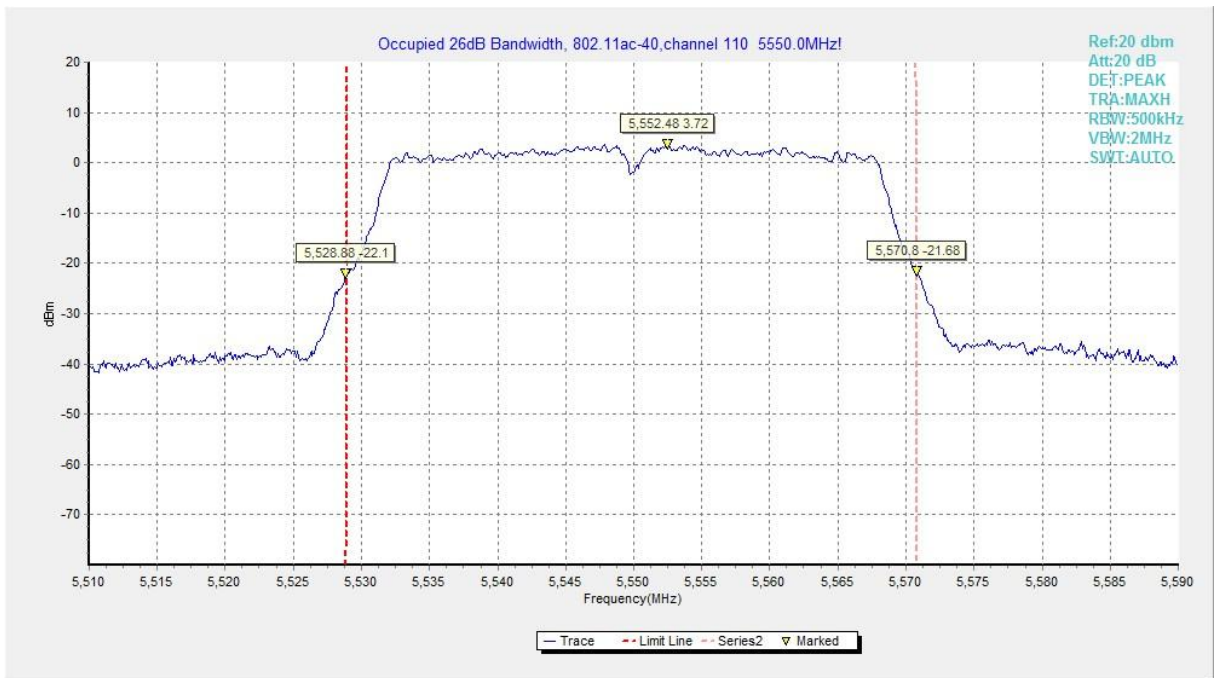


Fig.44 Occupied 26dB Bandwidth (802.11ac-HT40, 5550MHz)

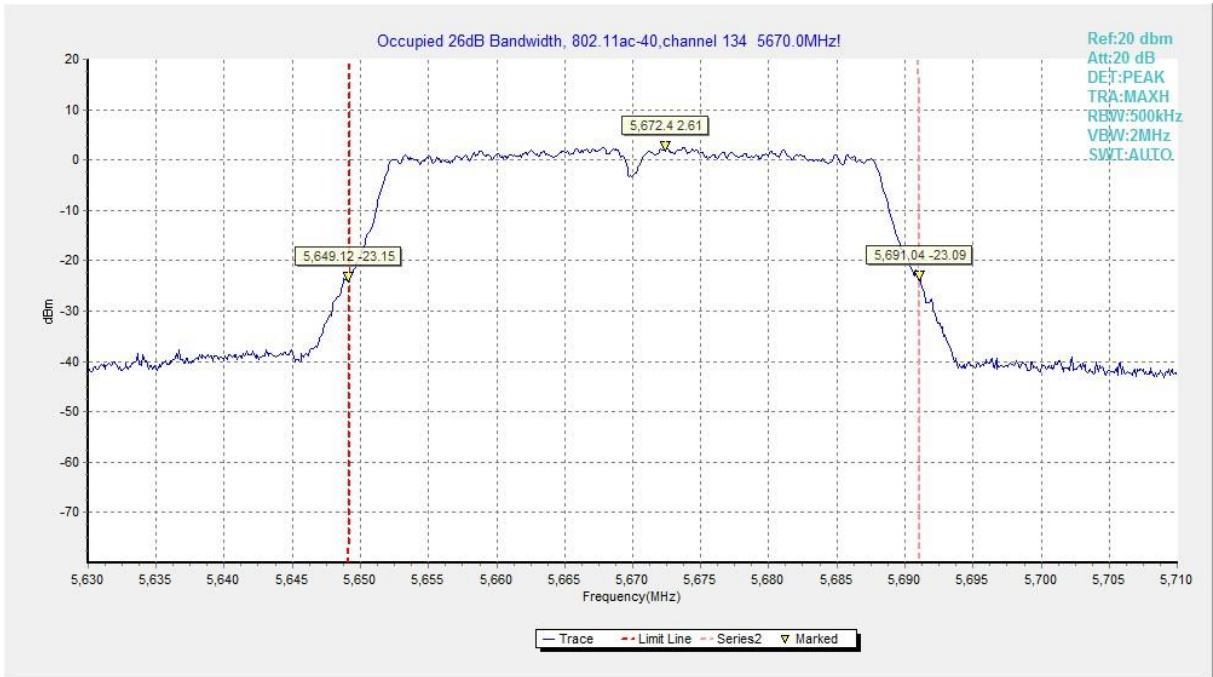


Fig.45 Occupied 26dB Bandwidth (802.11ac-HT40, 5670MHz)

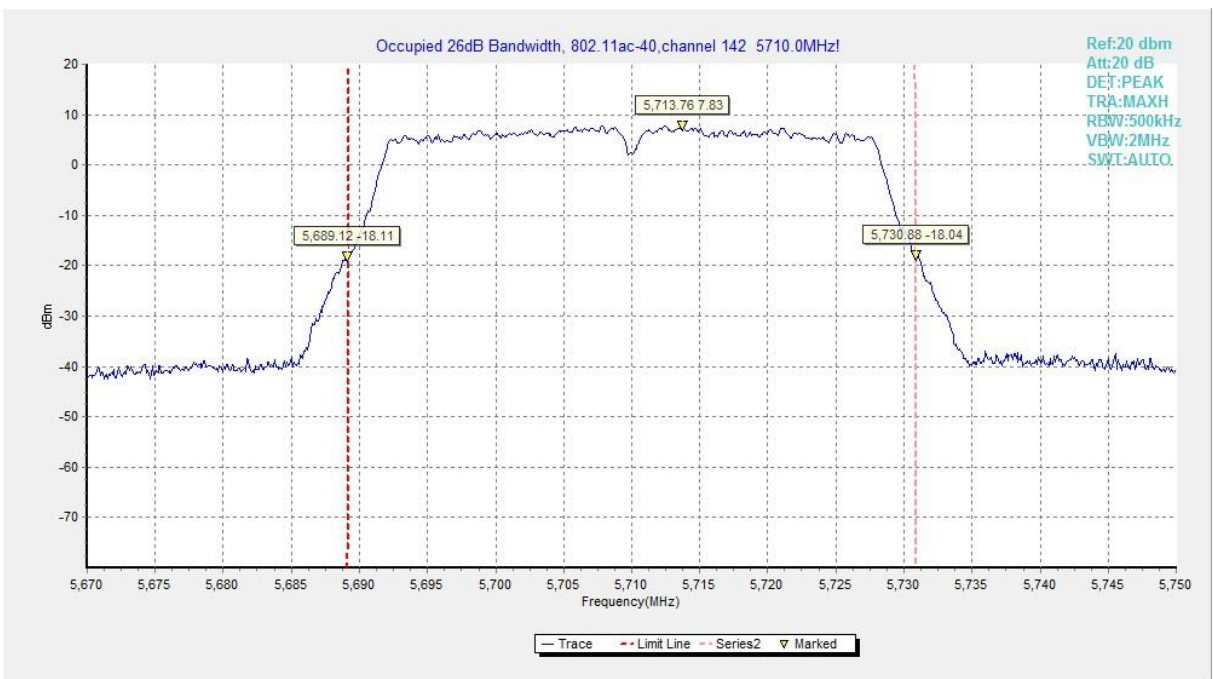


Fig.46 Occupied 26dB Bandwidth (802.11ac-HT40, 5710MHz)

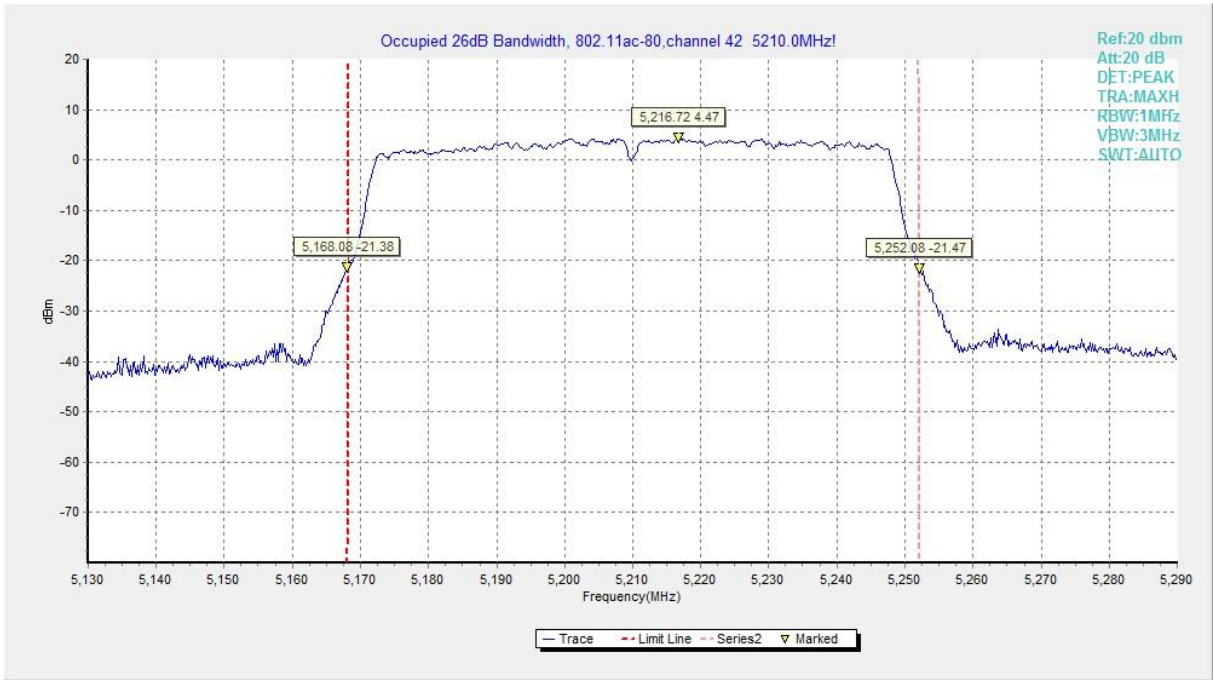


Fig.47 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

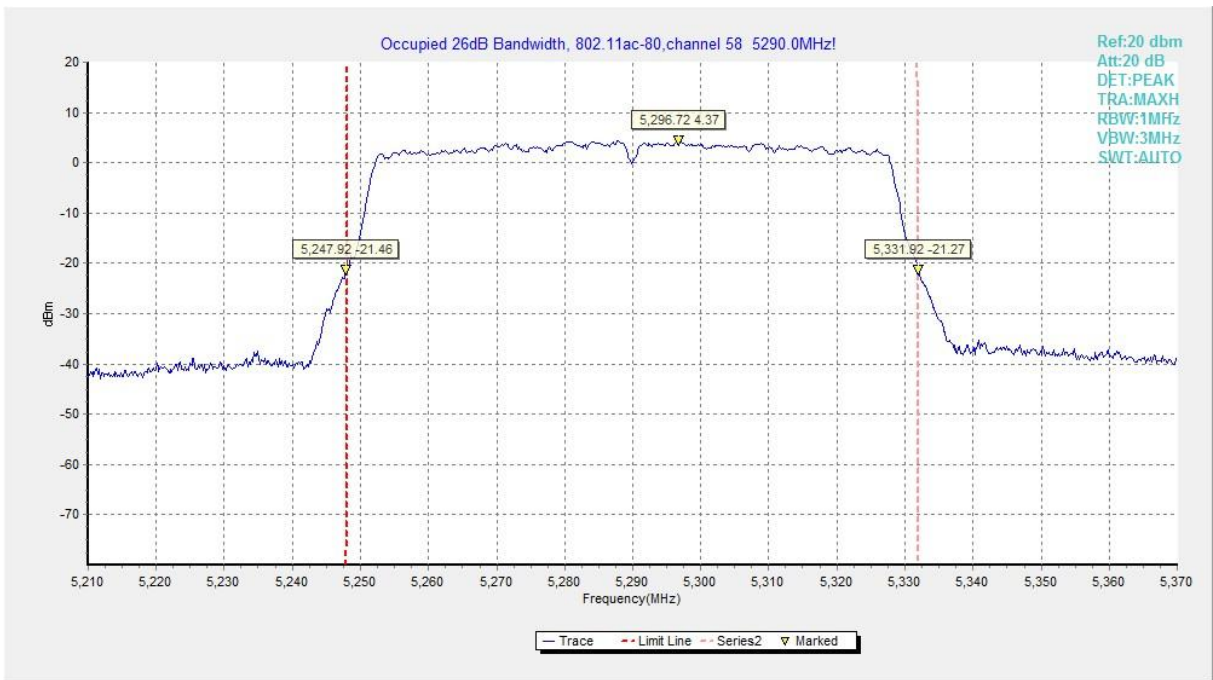


Fig.48 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

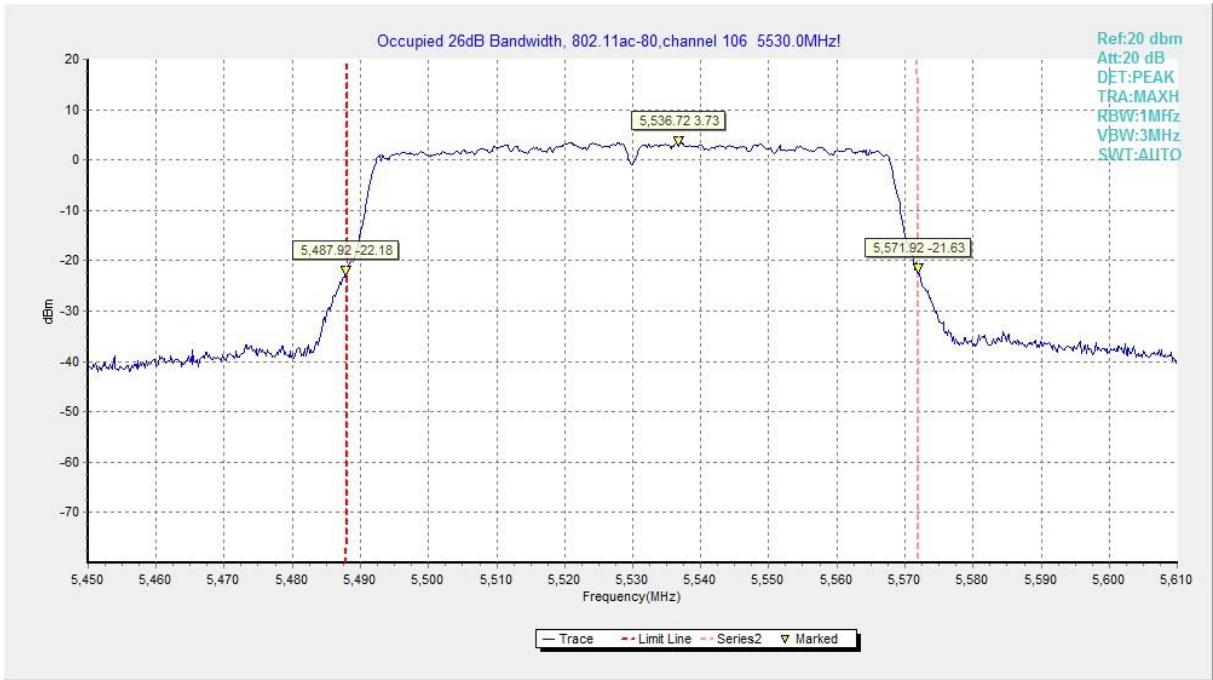


Fig.49 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

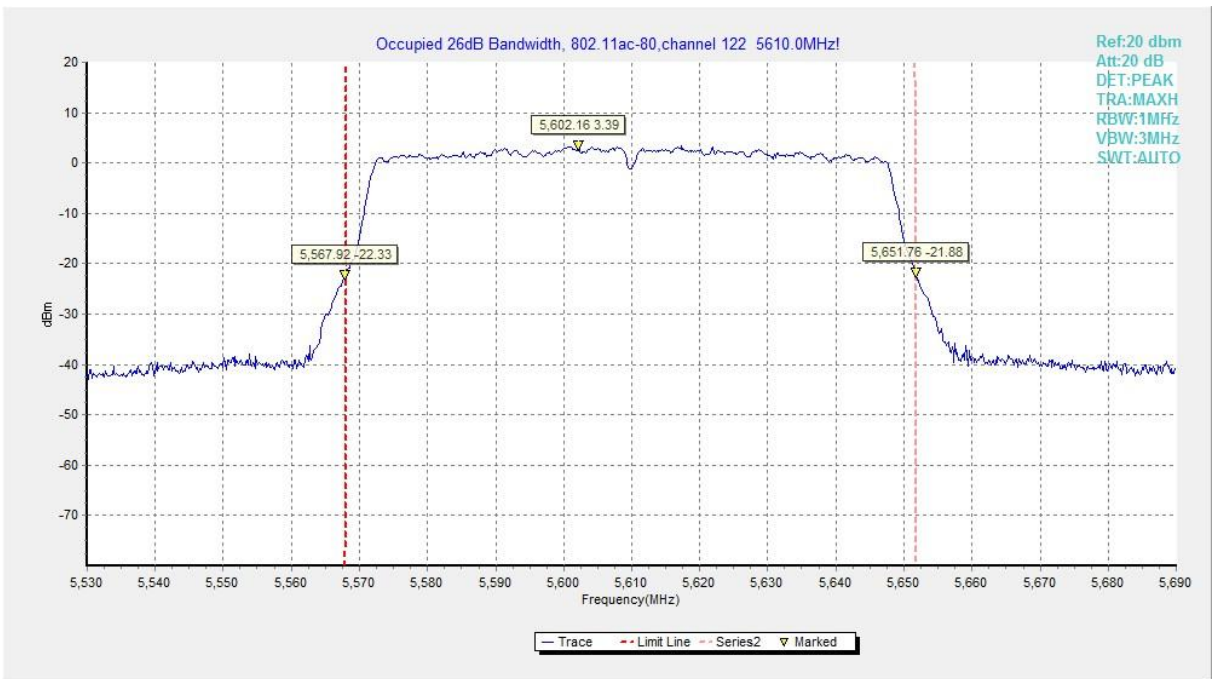


Fig.50 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

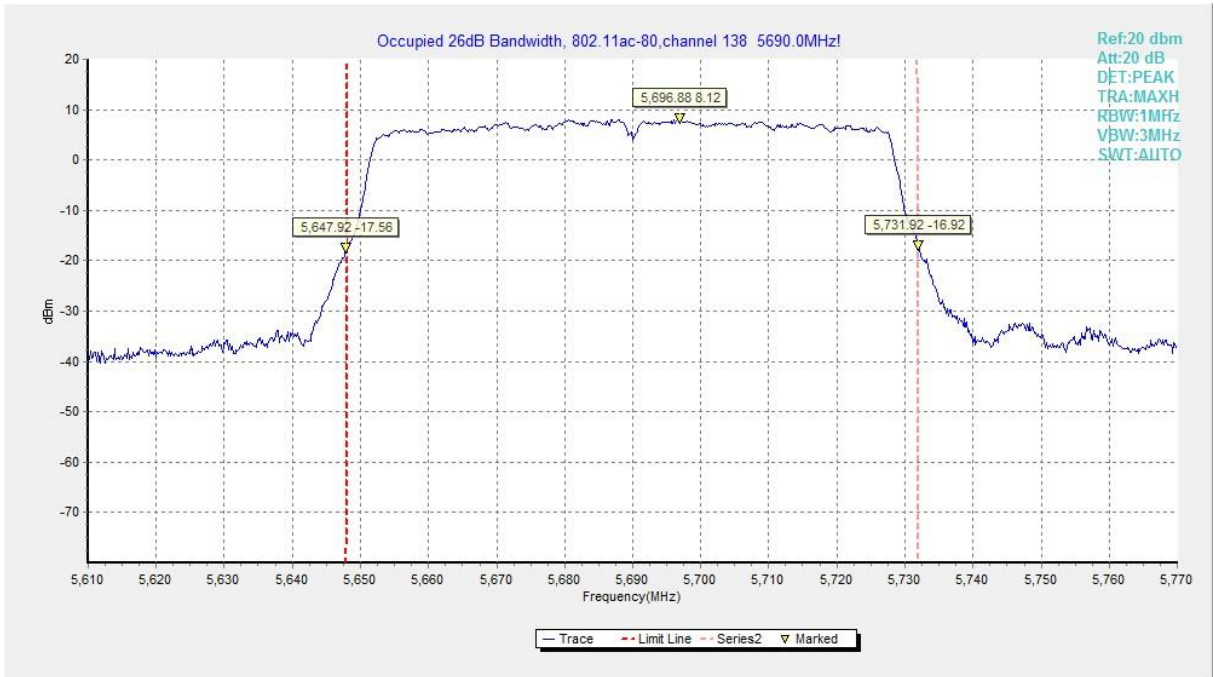


Fig.51 Occupied 26dB Bandwidth (802.11ac-HT80, 5690MHz)



A.5. Band Edges Compliance

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.52	P
	5320 MHz	Fig.53	P
	5500 MHz	Fig.54	P
	5700 MHz	Fig.55	P
802.11n HT40	5190 MHz	Fig.56	P
	5310 MHz	Fig.57	P
	5510 MHz	Fig.58	P
	5670 MHz	Fig.59	P
802.11ac HT80	5210MHz	Fig.60	P
	5290MHz	Fig.61	P
	5530MHz	Fig.62	P
	5610Mhz	Fig.63	P

Conclusion: PASS

Test graphs as below:

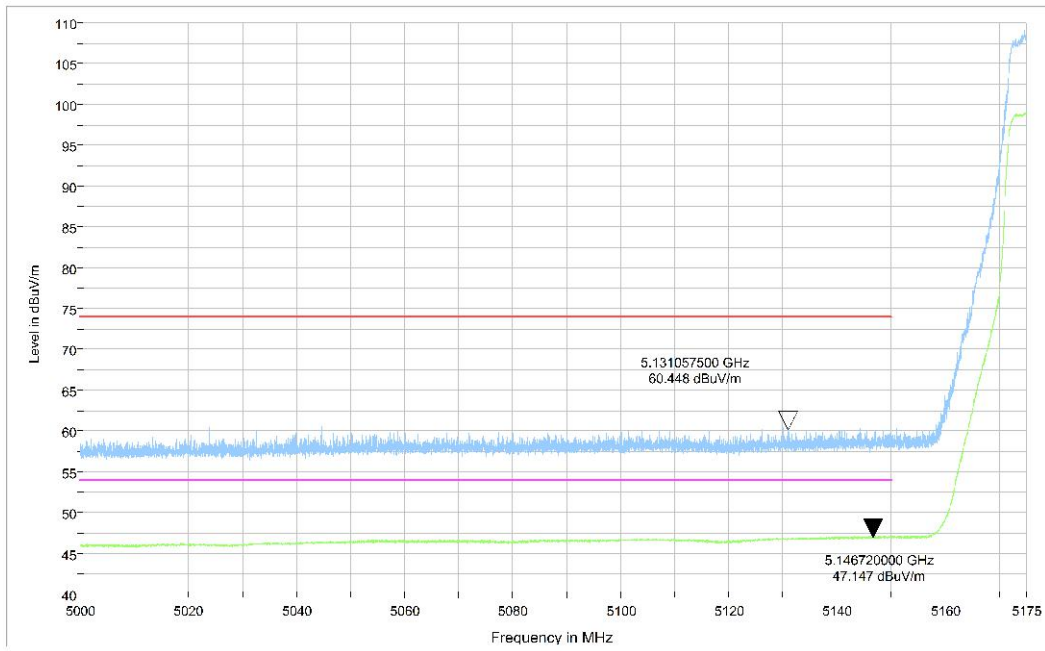


Fig. 52 Band Edges (802.11a Ch36, 5180MHz)

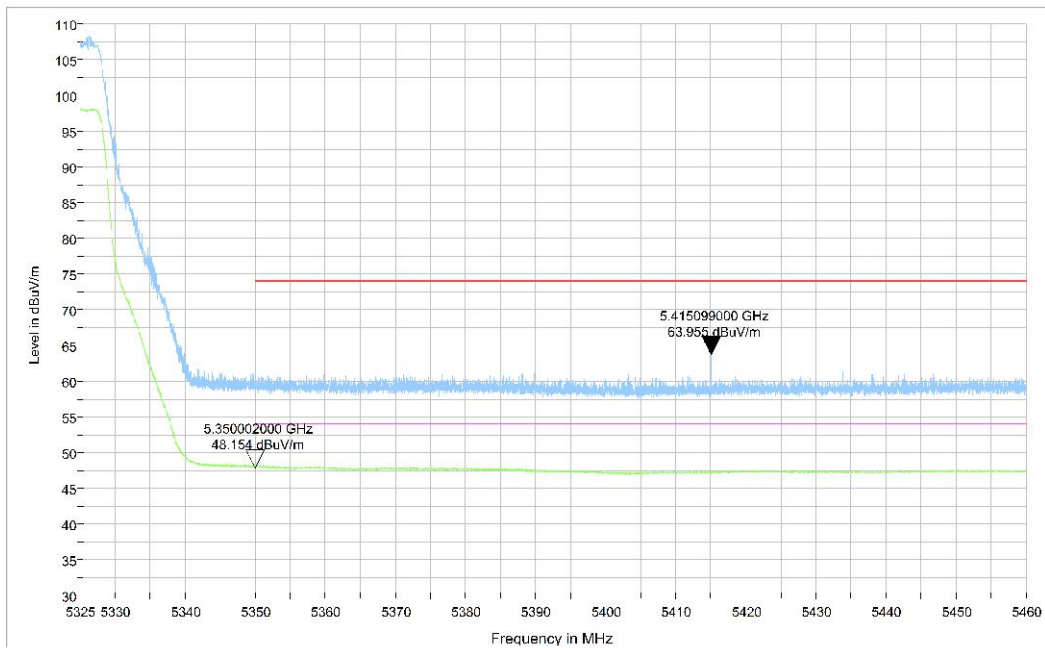


Fig. 53 Band Edges (802.11a Ch64, 5320MHz)

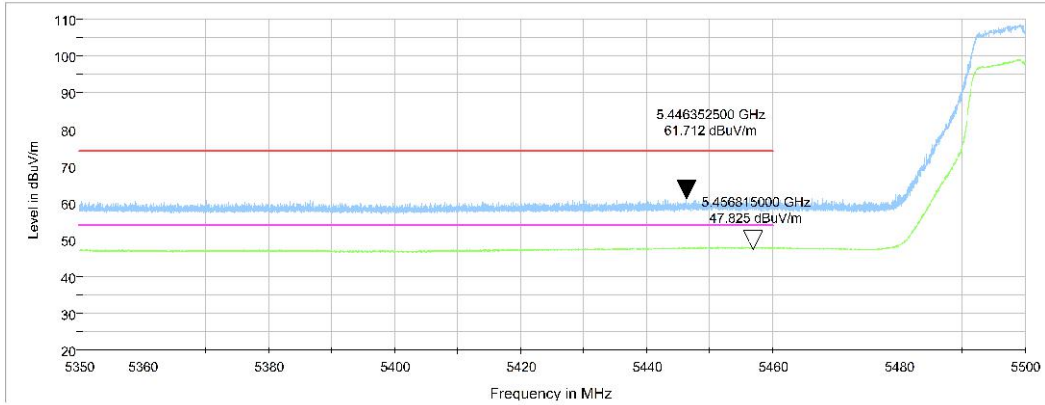


Fig. 54 Band Edges (802.11a Ch100, 5500MHz)

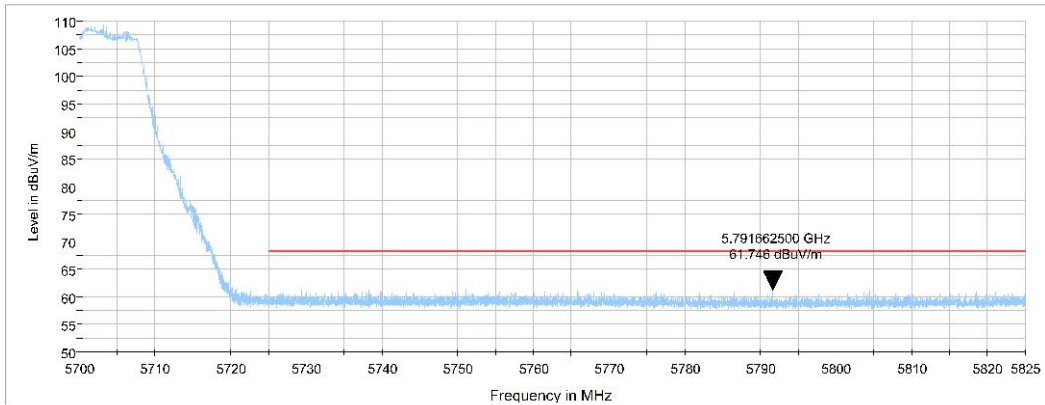


Fig. 55 Band Edges (802.11a Ch140, 5700MHz)

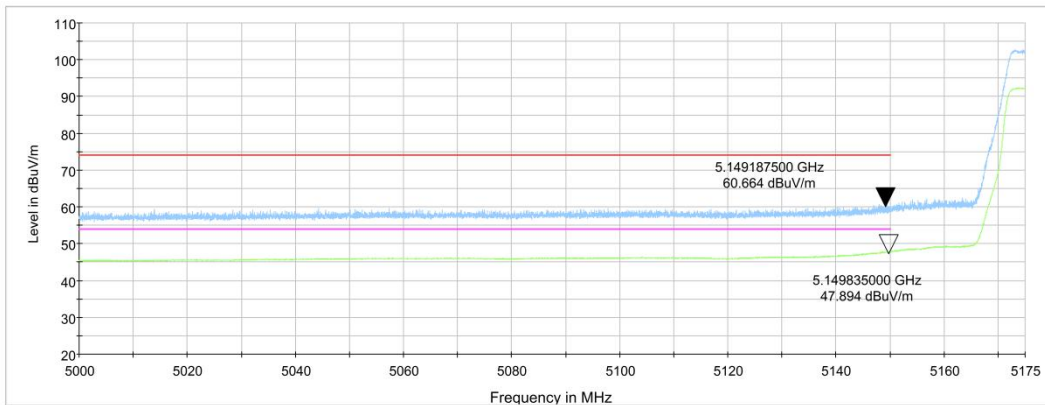


Fig. 56 Band Edges (802.11n-HT40 Ch38, 5190MHz)

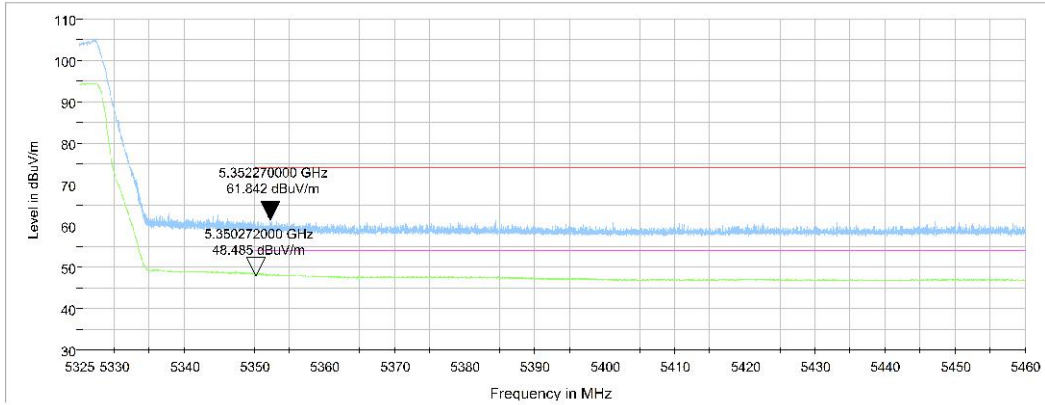


Fig. 57 Band Edges (802.11n-HT40 Ch62, 5310MHz)

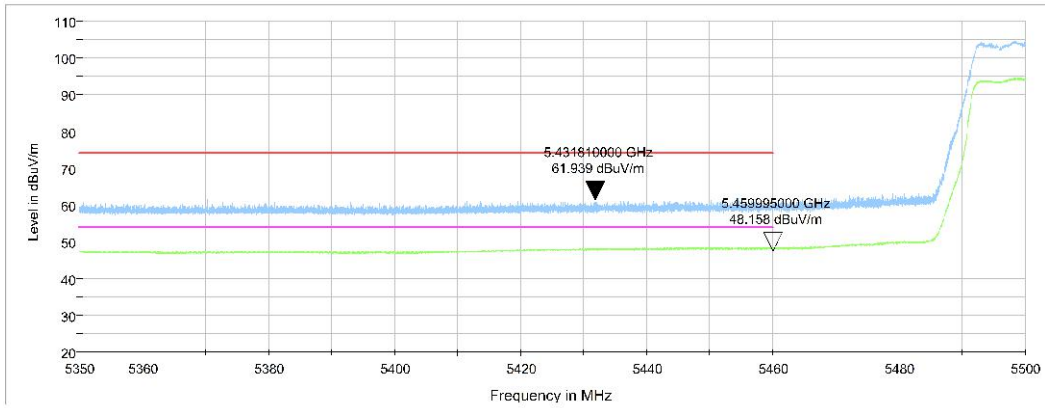


Fig. 58 Band Edges (802.11n-HT40 Ch102, 5510MHz)

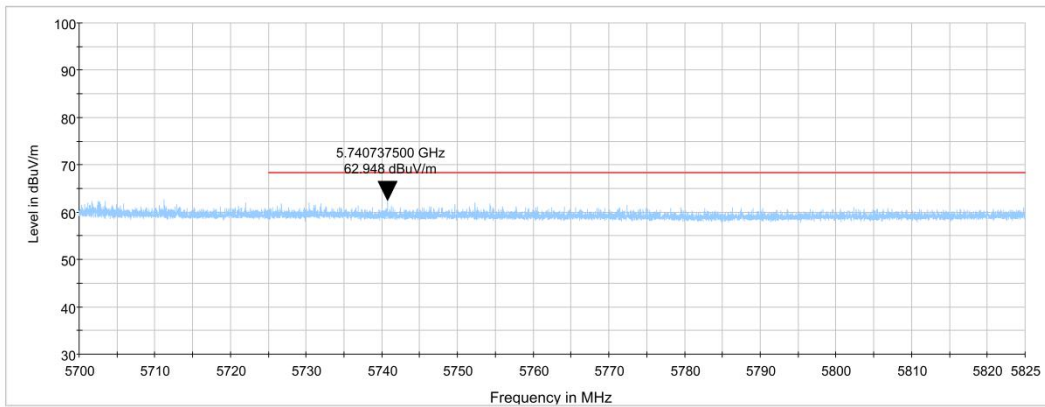


Fig. 59 Band Edges (802.11n-HT40 Ch134, 5670MHz)

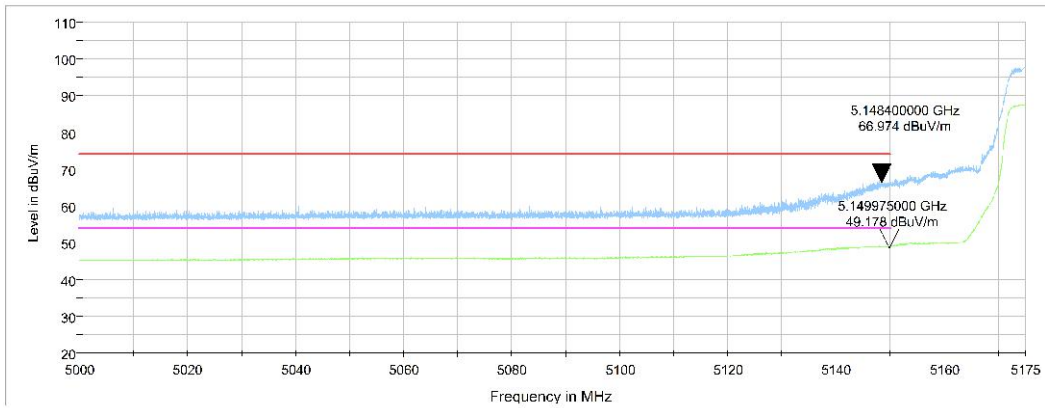


Fig. 60 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

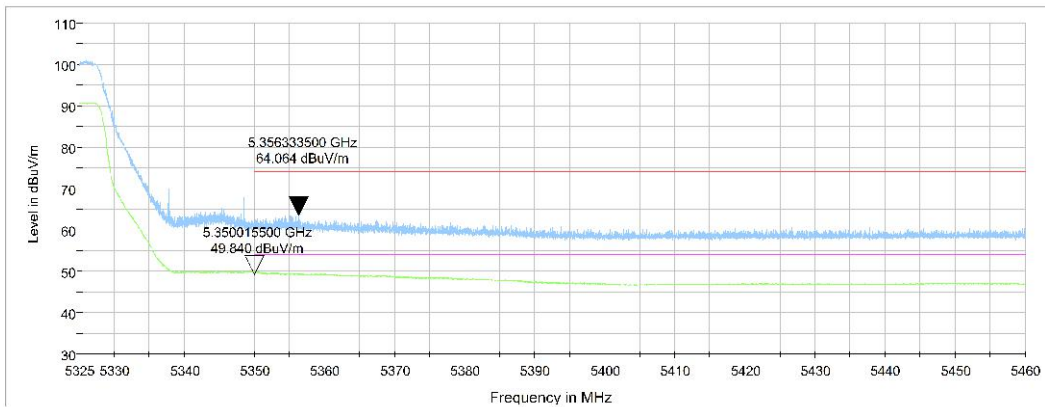


Fig. 61 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

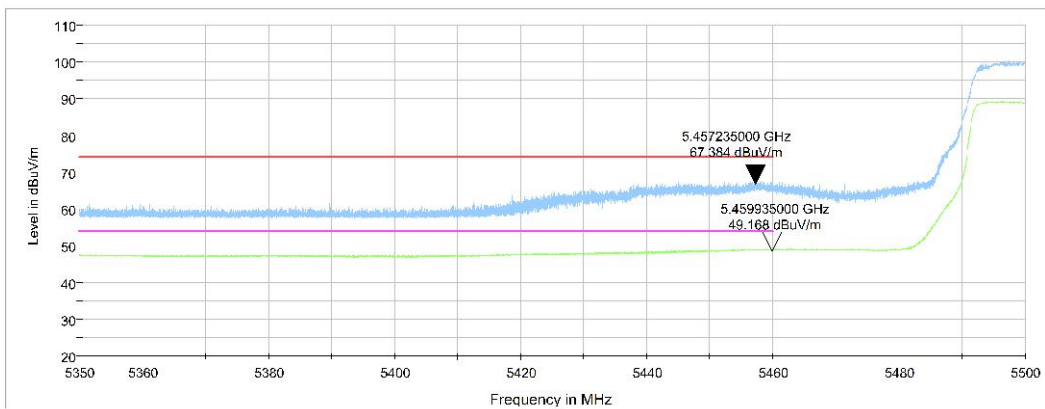


Fig. 62 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

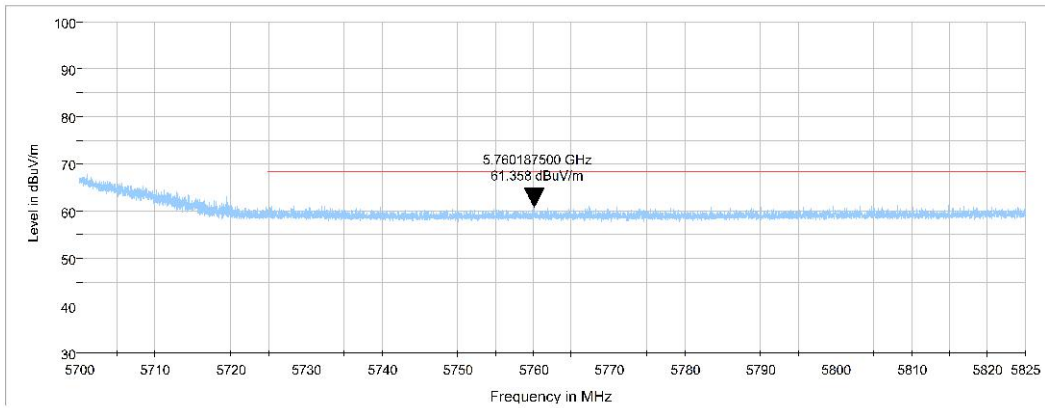


Fig. 63 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

A.6. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

Measurement Results:

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	120(5600MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	134(5670MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P

802.11ac-HT80 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac -HT80	42(5210MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	58(5290MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
	106(5530MHz)	26.5 GHz ~ 40 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
	122(5610MHz)	7 GHz ~ 18 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
			7 GHz ~ 18 GHz	---

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$



AVERAGE Results:

802.11a

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5147.200	44.7	-16.3	34.2	26.78	54.0	9.3	V
5149.200	44.7	-16.2	34.2	26.79	54.0	9.3	V
12448.800	39.1	-22.3	38.9	22.50	54.0	14.9	H
15540.000	39.6	-20.5	40.1	20.02	54.0	14.4	V
17736.800	41.2	-18.9	40.5	19.52	54.0	12.8	V
17751.200	41.1	-18.8	40.5	19.48	54.0	12.9	H

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5145.200	43.9	-16.3	34.2	26.03	54.0	10.1	V
5149.000	43.9	-16.3	34.2	26.04	54.0	10.1	V
12449.600	39.1	-22.3	38.9	22.45	54.0	14.9	H
15600.000	39.3	-20.6	40.2	19.68	54.0	14.7	V
17700.000	41.0	-19.0	40.5	19.44	54.0	13.0	V
17749.600	41.1	-18.8	40.5	19.44	54.0	12.9	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5145.400	43.8	-16.3	34.2	25.87	54.0	10.3	V
5147.000	43.8	-16.3	34.2	25.88	54.0	10.2	V
12452.000	38.9	-22.3	38.9	22.30	54.0	15.1	V
15720.000	39.4	-20.3	40.4	19.30	54.0	14.6	V
17700.800	40.9	-19.0	40.5	19.35	54.0	13.1	V
17737.600	41.2	-18.9	40.5	19.51	54.0	12.9	V



Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5141.400	44.0	-16.3	34.1	26.17	54.0	10.0	V
5350.200	44.8	-14.9	34.4	25.39	54.0	9.2	V
12448.000	38.9	-22.3	38.9	22.31	54.0	15.1	V
15780.000	39.6	-20.1	40.4	19.32	54.0	14.4	H
17706.400	40.9	-19.0	40.5	19.40	54.0	13.1	V
17742.400	41.2	-18.9	40.5	19.55	54.0	12.8	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5145.000	43.9	-16.3	34.1	26.05	54.0	10.1	V
5350.200	44.8	-14.9	34.4	25.32	54.0	9.2	V
12448.000	38.9	-22.3	38.9	22.34	54.0	15.1	H
15840.000	39.9	-20.3	40.5	19.63	54.0	14.1	H
17738.400	41.2	-18.9	40.5	19.54	54.0	12.8	V
17756.800	41.2	-18.9	40.5	19.59	54.0	12.8	V

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5350.600	44.4	-14.9	34.4	24.93	54.0	9.6	V
5356.600	44.3	-15.0	34.4	24.85	54.0	9.7	V
10640.000	35.2	-26.0	37.9	23.35	54.0	18.8	H
15960.000	40.0	-20.2	40.7	19.54	54.0	14.0	H
17734.400	41.1	-18.9	40.5	19.51	54.0	12.9	V
17750.400	41.2	-18.8	40.5	19.54	54.0	12.8	H



Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5450.200	44.9	-15.0	34.5	25.42	54.0	9.1	V
5455.800	45.0	-15.0	34.5	25.55	54.0	9.0	V
11000.000	35.8	-25.4	38.0	23.13	54.0	18.2	V
16184.800	40.5	-19.8	40.9	19.43	54.0	13.5	H
17704.000	40.9	-19.0	40.5	19.40	54.0	13.1	V
17744.800	41.3	-18.8	40.5	19.61	54.0	12.7	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5446.200	44.0	-15.0	34.4	24.61	54.0	10.0	V
5457.800	44.0	-15.0	34.5	24.57	54.0	10.0	V
11200.000	35.0	-25.6	38.1	22.52	54.0	19.0	V
16196.000	40.4	-19.7	40.9	19.19	54.0	13.6	H
17707.200	40.8	-19.0	40.5	19.30	54.0	13.2	H
17744.000	41.3	-18.8	40.5	19.61	54.0	12.7	H

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5447.000	43.9	-15.0	34.4	24.48	54.0	10.1	V
5459.200	44.0	-15.0	34.5	24.58	54.0	10.0	V
11400.000	35.1	-25.9	38.2	22.79	54.0	18.9	H
16196.000	40.5	-19.7	40.9	19.29	54.0	13.5	H
17702.400	41.0	-19.0	40.5	19.43	54.0	13.0	H
17746.400	41.3	-18.8	40.5	19.62	54.0	12.7	V

Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5450.000	44.1	-15.0	34.5	24.69	54.0	9.9	V
5454.800	44.1	-15.0	34.5	24.62	54.0	9.9	V
11440.000	35.4	-25.1	38.2	22.32	54.0	18.6	H
16196.800	40.4	-19.7	40.9	19.22	54.0	13.6	H
17740.800	41.2	-18.9	40.5	19.58	54.0	12.8	H
17756.000	41.1	-18.9	40.5	19.52	54.0	12.9	V



802.11n-HT40

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5149.000	45.1	-16.3	34.2	27.22	54.0	8.9	V
5150.000	45.2	-16.2	34.2	27.33	54.0	8.8	V
12452.000	38.9	-22.3	38.9	22.30	54.0	15.1	V
15570.400	39.7	-20.5	40.2	20.07	54.0	14.3	H
17701.600	40.9	-19.0	40.5	19.34	54.0	13.1	V
17753.600	41.2	-18.9	40.5	19.56	54.0	12.8	H

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5145.200	44.2	-16.3	34.2	26.28	54.0	9.8	V
5149.000	44.2	-16.3	34.2	26.30	54.0	9.8	V
12448.000	38.9	-22.3	38.9	22.33	54.0	15.1	H
15690.400	39.6	-20.2	40.3	19.52	54.0	14.4	V
17704.800	40.9	-19.0	40.5	19.36	54.0	13.1	H
17743.200	41.1	-18.8	40.5	19.48	54.0	12.9	H

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5350.400	44.6	-14.9	34.4	25.12	54.0	9.4	V
5354.600	44.5	-14.9	34.4	25.10	54.0	9.5	V
12452.000	39.0	-22.3	38.9	22.41	54.0	15.0	H
15810.400	39.9	-20.0	40.5	19.40	54.0	14.1	V
17704.800	40.9	-19.0	40.5	19.41	54.0	13.1	V
17747.200	41.2	-18.8	40.5	19.56	54.0	12.8	V

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5350.200	45.6	-14.9	34.4	26.18	54.0	8.4	V
5354.200	45.4	-14.9	34.4	25.97	54.0	8.6	V
10620.000	35.4	-25.9	37.8	23.46	54.0	18.6	V
15930.400	40.0	-20.1	40.6	19.45	54.0	14.0	V
17703.200	40.9	-19.0	40.5	19.37	54.0	13.1	H
17748.800	41.3	-18.8	40.5	19.60	54.0	12.7	H

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5455.800	45.6	-15.0	34.5	26.20	54.0	8.4	V
5459.200	45.7	-15.0	34.5	26.24	54.0	8.4	V
11020.000	35.7	-25.4	38.0	23.11	54.0	18.3	H
16146.400	40.4	-20.2	40.8	19.76	54.0	13.6	V
17704.800	40.9	-19.0	40.5	19.37	54.0	13.1	H
17749.600	41.2	-18.8	40.5	19.55	54.0	12.8	V

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5447.800	44.5	-15.0	34.4	25.10	54.0	9.5	V
5457.400	44.4	-15.0	34.5	25.00	54.0	9.6	V
11180.000	35.6	-25.4	38.1	22.84	54.0	18.4	V
16180.000	40.4	-19.9	40.9	19.39	54.0	13.6	H
17706.400	40.9	-19.0	40.5	19.34	54.0	13.1	V
17748.000	41.3	-18.8	40.5	19.62	54.0	12.7	V

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5449.000	44.4	-15.0	34.5	24.93	54.0	9.6	V
5457.600	44.5	-15.0	34.5	25.03	54.0	9.5	V
11340.000	36.7	-24.3	38.1	22.81	54.0	17.3	V
16185.600	40.4	-19.8	40.9	19.32	54.0	13.6	V
17704.000	41.0	-19.0	40.5	19.51	54.0	13.0	V
17747.200	41.3	-18.8	40.5	19.65	54.0	12.7	H

Channel 142

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5446.400	44.4	-15.0	34.4	24.93	54.0	9.7	V
5453.600	44.3	-15.0	34.5	24.91	54.0	9.7	V
11420.000	35.7	-25.5	38.2	23.02	54.0	18.3	H
16179.200	40.4	-19.9	40.9	19.39	54.0	13.6	H
17706.400	41.0	-19.0	40.5	19.44	54.0	13.0	H
17745.600	41.3	-18.8	40.5	19.60	54.0	12.7	H



802.11ac-HT80

Channel 42

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5147.400	46.4	-16.3	34.2	28.54	54.0	7.6	V
5149.800	46.4	-16.2	34.2	28.49	54.0	7.6	V
12452.000	38.9	-22.3	38.9	22.34	54.0	15.1	H
15630.400	39.5	-20.5	40.3	19.72	54.0	14.5	H
17705.600	40.9	-19.0	40.5	19.36	54.0	13.1	V
17746.400	41.2	-18.8	40.5	19.55	54.0	12.8	V

Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5350.000	47.7	-14.9	34.4	28.24	54.0	6.3	V
5353.000	47.5	-14.9	34.4	28.04	54.0	6.5	V
12452.000	38.9	-22.3	38.9	22.34	54.0	15.1	V
15870.400	39.8	-20.2	40.5	19.37	54.0	14.2	V
17731.200	41.1	-18.9	40.5	19.52	54.0	12.9	V
17750.400	41.2	-18.8	40.5	19.57	54.0	12.8	V

Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5455.000	46.3	-15.0	34.5	26.86	54.0	7.7	V
5458.800	46.5	-15.0	34.5	27.13	54.0	7.5	V
11060.000	35.5	-25.4	38.0	22.87	54.0	18.5	H
16191.200	40.4	-19.8	40.9	19.30	54.0	13.6	H
17703.200	40.9	-19.0	40.5	19.37	54.0	13.1	V
17744.800	41.3	-18.8	40.5	19.60	54.0	12.7	H



Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5446.200	44.6	-15.0	34.4	25.15	54.0	9.4	V
5456.800	44.6	-15.0	34.5	25.16	54.0	9.4	V
11220.000	35.8	-25.1	38.1	22.80	54.0	18.2	V
16196.000	40.4	-19.7	40.9	19.19	54.0	13.6	V
17706.400	41.0	-19.0	40.5	19.42	54.0	13.0	V
17749.600	41.3	-18.8	40.5	19.61	54.0	12.7	H

Channel 138

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5447.800	44.6	-15.0	34.4	25.18	54.0	9.4	V
5458.400	44.6	-15.0	34.5	25.20	54.0	9.4	V
11380.000	35.7	-25.2	38.2	22.65	54.0	18.3	V
16184.800	40.4	-19.8	40.9	19.32	54.0	13.6	H
17704.000	40.9	-19.0	40.5	19.40	54.0	13.1	H
17746.400	41.4	-18.8	40.5	19.72	54.0	12.6	V



PEAK Results:

802.11a

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5131.058	60.4	-16.4	34.1	42.68	74.0	13.6	V
5144.410	60.3	-16.3	34.1	42.44	74.0	13.7	V
10359.950	47.1	-25.8	37.7	35.19	68.3	21.2	V
15539.850	52.8	-20.5	40.1	33.24	74.0	21.2	V
16912.100	55.5	-19.0	41.2	33.32	68.3	12.8	V
17137.600	55.4	-19.3	41.1	33.68	68.3	12.9	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5172.600	58.9	-16.4	34.2	41.11	68.3	9.4	V
5228.200	58.6	-16.4	34.2	40.79	68.3	9.7	V
10400.100	46.3	-25.8	37.7	34.36	68.3	22.0	V
15599.800	50.2	-20.6	40.2	30.56	74.0	23.8	H
16636.550	55.2	-19.4	41.2	33.39	68.3	13.1	H
17628.200	55.1	-18.2	40.6	32.66	68.3	13.2	H

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5213.600	58.8	-16.4	34.2	41.00	68.3	9.5	V
5264.600	59.6	-16.2	34.3	41.55	68.3	8.7	V
10479.850	46.0	-26.0	37.8	34.23	68.3	22.3	V
15720.250	51.2	-20.3	40.4	31.11	74.0	22.8	H
16929.150	55.2	-19.0	41.2	32.98	68.3	13.1	H
17030.350	55.9	-19.3	41.2	34.01	68.3	12.4	H



Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5235.000	58.8	-16.3	34.2	40.87	68.3	9.5	V
5281.800	59.1	-16.1	34.3	40.94	68.3	9.2	V
10520.000	47.5	-25.9	37.8	35.56	68.3	20.8	H
15780.200	51.3	-20.1	40.4	31.02	74.0	22.7	V
16942.350	55.2	-19.0	41.2	32.99	68.3	13.1	H
17520.950	55.6	-18.7	40.7	33.61	68.3	12.7	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5248.400	59.3	-16.3	34.3	41.37	68.3	9.0	V
5304.400	59.6	-16.0	34.3	41.24	68.3	8.7	V
10560.150	47.0	-25.8	37.8	34.95	68.3	21.3	H
15840.150	53.1	-20.3	40.5	32.85	74.0	20.9	H
16862.050	55.6	-19.5	41.2	33.88	68.3	12.7	H
16953.900	55.7	-19.0	41.2	33.48	68.3	12.6	V

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5389.954	61.1	-15.2	34.4	41.90	74.0	12.9	V
5415.099	64.0	-15.2	34.4	44.73	74.0	10.0	V
10639.900	46.5	-26.0	37.9	34.70	74.0	27.5	H
15960.050	51.7	-20.2	40.7	31.19	74.0	22.3	H
17209.650	55.6	-19.0	41.0	33.61	68.3	12.7	V
17398.850	55.4	-18.4	40.8	32.92	68.3	12.9	V



Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5446.353	61.7	-15.0	34.4	42.29	74.0	12.3	V
5456.395	61.6	-15.0	34.5	42.13	74.0	12.4	V
11000.150	48.0	-25.4	38.0	35.34	74.0	26.0	H
16500.150	52.6	-19.6	41.2	30.98	68.3	15.7	H
16906.050	55.4	-19.0	41.2	33.24	68.3	12.9	H
17024.300	56.0	-19.2	41.2	34.06	68.3	12.3	H

Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5575.000	59.4	-15.6	34.6	40.41	68.3	8.9	V
5623.600	60.4	-15.7	34.7	41.53	68.3	7.9	V
11199.800	45.9	-25.6	38.1	33.40	74.0	28.1	H
16799.900	52.8	-19.7	41.2	31.21	68.3	15.5	H
16948.950	55.7	-19.0	41.2	33.49	68.3	12.6	H
17104.050	55.6	-19.0	41.1	33.54	68.3	12.7	H

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5729.475	61.3	-16.1	34.8	42.59	68.3	7.0	V
5791.663	61.7	-15.8	34.9	42.66	68.3	6.6	V
11400.000	46.4	-25.9	38.2	34.07	74.0	27.6	V
17044.650	56.2	-19.3	41.2	34.33	68.3	12.1	V
17100.200	53.8	-19.0	41.1	31.73	68.3	14.5	V
17343.300	56.0	-18.8	40.9	33.98	68.3	12.3	V

Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5656.600	60.1	-15.9	34.7	41.26	68.3	8.2	V
5777.400	60.6	-15.9	34.8	41.64	68.3	7.7	V
11440.150	47.6	-25.1	38.2	34.48	74.0	26.4	V
16991.300	55.1	-19.1	41.2	33.02	68.3	13.2	V
17086.450	55.5	-19.1	41.1	33.43	68.3	12.8	H
17160.150	53.5	-19.3	41.0	31.76	68.3	14.8	V

**802.11n-HT40**

Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5149.188	60.7	-16.2	34.2	42.76	74.0	13.3	V
5149.818	60.3	-16.2	34.2	42.40	74.0	13.7	V
10379.750	46.9	-25.8	37.7	34.97	68.3	21.4	V
15570.100	51.1	-20.5	40.2	31.50	74.0	22.9	V
16956.100	55.6	-19.0	41.2	33.41	68.3	12.7	H
17519.850	55.6	-18.7	40.7	33.69	68.3	12.7	H

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5198.000	60.6	-16.5	34.2	42.86	68.3	7.7	V
5258.400	61.4	-16.2	34.3	43.37	68.3	6.9	V
10460.050	47.3	-26.1	37.8	35.63	68.3	21.0	H
15690.000	51.5	-20.2	40.3	31.41	74.0	22.5	H
16969.300	54.9	-19.0	41.2	32.71	68.3	13.4	V
17638.100	55.3	-18.2	40.6	32.91	68.3	13.0	H

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5240.600	61.6	-16.3	34.2	43.64	68.3	6.7	V
5297.800	60.0	-16.1	34.3	41.75	68.3	8.3	V
10539.800	47.2	-25.8	37.8	35.24	68.3	21.1	V
15809.900	53.2	-20.0	40.5	32.71	74.0	20.8	H
17011.650	55.4	-19.2	41.2	33.42	68.3	12.9	V
17271.250	55.9	-19.1	40.9	34.11	68.3	12.4	H



Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5352.270	61.8	-14.9	34.4	42.41	74.0	12.2	V
5384.360	61.4	-15.2	34.4	42.16	74.0	12.6	V
10620.100	47.8	-25.9	37.8	35.89	74.0	26.2	V
15929.800	52.0	-20.1	40.6	31.51	74.0	22.0	H
17005.050	56.4	-19.2	41.2	34.32	68.3	11.9	H
17068.850	56.1	-19.2	41.1	34.19	68.3	12.2	H

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5431.810	61.9	-15.1	34.4	42.61	74.0	12.1	V
5459.388	61.0	-15.0	34.5	41.61	74.0	13.0	V
11019.950	47.1	-25.4	38.0	34.48	74.0	26.9	V
16529.850	53.0	-19.7	41.2	31.50	68.3	15.3	V
17127.150	55.3	-19.2	41.1	33.48	68.3	13.0	H
17416.450	55.4	-18.6	40.8	33.17	68.3	12.9	H

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5563.000	60.8	-15.5	34.6	41.77	68.3	7.5	V
5621.200	59.8	-15.7	34.7	40.86	68.3	8.5	V
11180.000	47.2	-25.4	38.1	34.50	74.0	26.8	H
16434.700	55.8	-19.6	41.1	34.30	68.3	12.5	V
16770.200	53.2	-19.2	41.2	31.21	68.3	15.1	H
16979.750	55.6	-19.1	41.2	33.45	68.3	12.7	H

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5740.738	62.9	-16.1	34.8	44.24	68.3	5.4	V
5752.325	62.0	-16.1	34.8	43.26	68.3	6.3	V
11340.050	47.5	-24.3	38.1	33.63	74.0	26.5	V
16666.800	55.2	-19.3	41.2	33.28	68.3	13.1	H
17010.000	53.4	-19.2	41.2	31.36	68.3	14.9	V
17019.900	55.8	-19.2	41.2	33.79	68.3	12.5	H

Channel 142

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5682.400	60.4	-16.0	34.7	41.76	68.3	7.9	V
5738.400	60.3	-16.1	34.8	41.60	68.3	8.0	V
11419.800	47.8	-25.5	38.2	35.13	74.0	26.2	V
17129.900	52.3	-19.2	41.1	30.45	68.3	16.0	V
17416.450	55.9	-18.6	40.8	33.69	68.3	12.4	V
17516.550	55.8	-18.7	40.7	33.83	68.3	12.5	V

802.11ac-HT80

Channel 42

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5147.980	66.7	-16.3	34.2	48.83	74.0	7.3	V
5148.400	67.0	-16.3	34.2	49.07	74.0	7.0	V
10419.900	46.3	-25.9	37.7	34.52	68.3	22.0	H
15630.050	50.8	-20.5	40.3	31.04	74.0	23.2	H
17055.650	55.4	-19.3	41.1	33.53	68.3	12.9	V
17451.650	55.4	-19.0	40.7	33.65	68.3	12.9	V

Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5355.267	63.5	-14.9	34.4	44.12	74.0	10.5	V
5356.334	64.1	-15.0	34.4	44.65	74.0	9.9	V
10579.950	46.9	-25.8	37.8	34.87	68.3	21.4	V
15869.850	51.7	-20.2	40.5	31.36	74.0	22.3	V
16990.200	55.7	-19.1	41.2	33.62	68.3	12.6	V
17514.900	55.3	-18.7	40.7	33.31	68.3	13.0	V

Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5457.235	67.4	-15.0	34.5	47.96	74.0	6.6	V
5458.458	67.3	-15.0	34.5	47.86	74.0	6.7	V
11060.100	46.6	-25.4	38.0	34.04	74.0	27.4	V
16589.800	55.7	-19.8	41.2	34.25	68.3	12.6	H
16932.450	52.7	-19.0	41.2	30.46	68.3	15.6	H
17341.100	55.9	-18.8	40.9	33.84	68.3	12.4	H

Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5728.425	61.0	-16.1	34.8	42.28	68.3	7.3	V
5760.188	61.4	-16.0	34.8	42.54	68.3	6.9	V
11220.150	47.5	-25.1	38.1	34.56	74.0	26.5	H
16657.450	55.2	-19.2	41.2	33.28	68.3	13.1	V
16830.150	53.2	-19.6	41.2	31.59	68.3	15.1	V
16986.900	55.6	-19.1	41.2	33.53	68.3	12.7	H

Channel 138

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
5593.000	59.9	-15.6	34.6	40.95	68.3	8.4	V
5793.400	61.4	-15.8	34.9	42.34	68.3	6.9	V
11380.200	47.9	-25.2	38.2	34.93	74.0	26.1	V
16983.600	55.4	-19.1	41.2	33.26	68.3	12.9	H
17069.950	53.2	-19.2	41.1	31.30	68.3	15.1	H
17105.150	55.4	-19.0	41.1	33.30	68.3	12.9	H

A.7. AC Power line Conducted Emission (150kHz- 30MHz)

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.10dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		With charger AE5	
		802.11a	
0.15 to 0.5	66 to 56	Fig.64	P
0.5 to 5	56		
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)	Conclusion
		With charger AE5	
		802.11a	
0.15 to 0.5	67 56 to 46	Fig.64	P
0.5 to 5	46		
5 to 30	50		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: PASS

Test graphs as below:

Traffic:

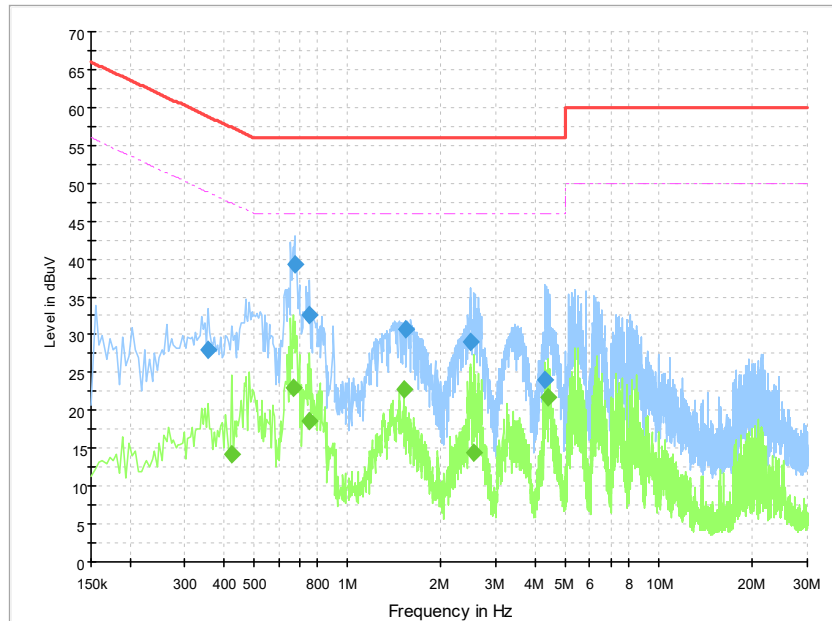


Fig. 64 AC Power line Conducted Emission-802.11a

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.357000	28.0	3000.0	9.000	On	L1	19.9	30.8	58.8
0.676500	39.2	3000.0	9.000	On	L1	19.8	16.8	56.0
0.757500	32.6	3000.0	9.000	On	L1	19.8	23.4	56.0
1.531500	30.6	3000.0	9.000	On	L1	19.7	25.4	56.0
2.485500	29.0	3000.0	9.000	On	L1	19.6	27.0	56.0
4.303500	24.0	3000.0	9.000	On	N	19.6	32.0	56.0

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.424500	14.1	3000.0	9.000	On	N	19.9	33.2	47.4
0.667500	23.0	3000.0	9.000	On	L1	19.8	23.0	46.0
0.757500	18.6	3000.0	9.000	On	L1	19.8	27.4	46.0
1.513500	22.7	3000.0	9.000	On	L1	19.7	23.3	46.0
2.557500	14.5	3000.0	9.000	On	N	19.6	31.5	46.0
4.420500	21.7	3000.0	9.000	On	L1	19.6	24.3	46.0

Note2: The measurement results showed here are worst cases.

A.8. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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Measurement Result:

Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.72	17.12	P
	5200 MHz	Fig.73	17.14	P
	5240 MHz	Fig.74	18.26	P
802.11n HT20	5180 MHz	Fig.75	18.29	P
	5200 MHz	Fig.76	18.27	P
	5240 MHz	Fig.77	18.27	P
802.11ac HT20	5180 MHz	Fig.78	18.32	P
	5200 MHz	Fig.79	18.30	P
	5240 MHz	Fig.80	18.29	P
802.11n	5190 MHz	Fig.81	36.32	P

HT40	5230 MHz	Fig.82	36.32	P
802.11ac	5190 MHz	Fig.83	36.33	P
HT40	5230 MHz	Fig.84	36.32	P
802.11ac HT80	5210 MHz	Fig.85	75.67	P

Conclusion: PASS

Test graphs as below:

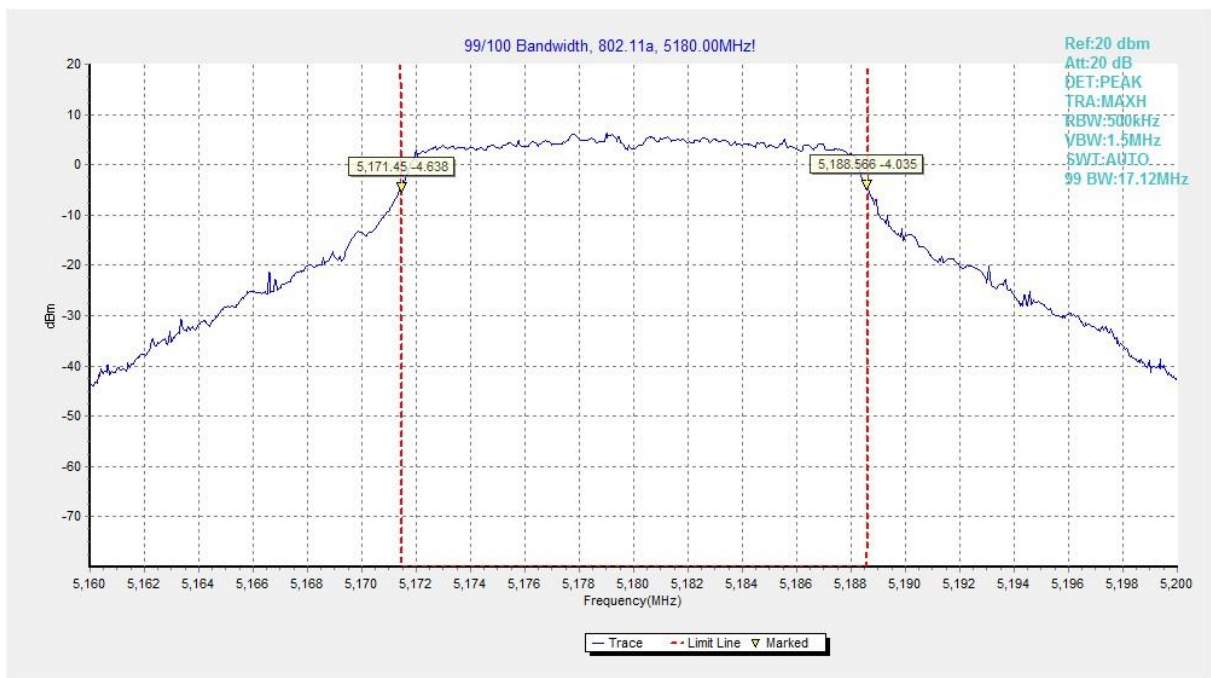


Fig.72 99% Occupied bandwidth (802.11a, 5180MHz)